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Rebecca Mulheron  
Burlington VT - Email me on Indeed: indeed.com/r/Rebecca-Mulheron/8c150d2673fd81dc  
Willing to relocate: Anywhere  
Authorized to work in the US for any employer  
WORK EXPERIENCE  
Medical Research Laboratory Technician II  
University of Vermont Pathology Department - Burlington VT - January 2015 to Present  
Duties focused on maintaining a large clinical research biorepository through client sample receipt (tracked shipments sample log in) prepped samples for testing aliquoted samples for repository placed samples in repository maintained off site repository storage database management data entry created excel spreadsheets order materials communication with sampling sites (supply material trouble shoot problems) trained new employees manage day to day activities of the study and ensure the study runs smoothly. Tested samples for Glucose Calcium and Creatinine levels on a Roche Cobas c311 analyzer. Regularly accession patient samples in the Fletcher Allen Hospital Sunquest LIS system. Experience working in a fast paced heavy work load CLIA certified Biosafety Level 2 laboratory. Well versed with keeping projects on task and meeting deadlines.  
Molecular & Genetics Lab Research Scientist  
Nova Southeastern University - Dania Beach FL - December 2011 to August 2014  
Responsibilities  
Laboratory techniques utilized regularly were: gel electrophoresis PCR PCR gel band purification DNA extraction RNA extraction and field tissue sampling. General experience with qPCR and microarray analysis. Other laboratory duties included ordering equipment logging inventory preparing solutions equipment calibration mentoring undergraduate students assistant faulty and visiting research scientists.  
Accomplishments  
My research focused on the Sponge Orange Band Disease outbreak in Xestospongia muta (giant barrel sponge) during 2012 by examining the etiology of the disease microbiomes of diseased and healthy sponges. A total of 51 distinct 16S rRNA amplicon libraries were constructed from universal V4 primers (515F /806R) and sequenced using the 454 Titanium GS FLX platform. The sequences produced were analyzed using the Quantitative Insights into Microbial Ecology v.1.8.0 (QIIME). The goal was to determine if the disease was caused by a possible microbial causative agent. This research was also part of the Earth Microbiome Project.  
Other research positions involved participating on the Porifera Tree of Life Project which focused on defining the phylogenetic relationships within Porifera that still remain unsolved. In particular the monophyly of the Porifera phylum and its largest class; Demospongiae has been questioned and the relationships among its major lineages. The lack of a robust phylogenetic hypothesis for this phylum hampers progress in basic studies of sponge biology biodiversity comparative evolutionary studies and efforts to conserve sponges. The goal was to provide a phylogenetic context that would improve the understanding of all aspects of sponge biology (https://www.portol.org/). I was specifically working on identifying the genetic differences between sponge species using 18S rRNA and 28S rRNA analysis. The analyses included using software such as Geneious to evaluate sequences.  
   
I also assisted on both sub-projects of the BP oil and dispersant exposure experiment. The first looked at the effect of BP oil and dispersant on the microbial communities of sponge Cinachyrella australiensis. I evaluated a region of the 28S gene to determine is the sponge samples themselves all belonged to the sample species or if some represent a unknown subspecies. I also completed the RNA extraction for samples which looked at the Cinachyrella australiensis gene expression change to the BP oil and dispersant  
Skills Used  
While I was employed I demonstrate the ability to work independently and within a team. I took leadership roles within different research projects and general laboratory maintenance. I am well versed with computer software: Mega Excel Word PowerPoint Geneious Quantitative Insights Into Microbial Ecology (QIIME) and National Center for Biotechnology Information (NCBI) Database.  
Coral Nursery and Coral Restoration Scientist  
Nova Southeastern University - Dania Beach FL - August 2011 to December 2012  
Responsibilities  
Duties included taking care of Nova Southeastern Oceanographic Centers outdoor nurseries. This included general maintenance such as water quality measurements tank cleaning coral growth measurements coral propagation coral out planting and field coral monitoring assessments.  
Line Operator  
IBM - Essex Junction VT - December 2009 to July 2011  
Responsibilities  
Job duties included loading and unloading of product increased product output through trouble shooting tools and computer log analysis. Training new employees on selected tools to maintain and increase output.  
Coral Laboratory Technician  
Motes Tropical Research Laboratory - Summerland Key FL - October 2009 to December 2009  
Responsibilities  
Duties included maintaining coral aquariums through cleaning feeding and monitoring water quality. Water quality tests included measuring pH salinity and temperature. Cleaning involved the removal of algae and parasites from both individual corals and the overall tanks. Coral mounting bases were made by hand and the experience of cutting and mounting new corals was acquired. I helped renovated the indoor laboratory by replacing all of the filtration and water flow systems. I updated and organized the coral photographic inventory. I used Sigma Scan and the new photos to measure the area of the corals which was compared with the previous year to measure coral growth. I used both Excel and PowerPoint to present findings and research.  
Lab Technician I  
Waterbury State Environmental Lab State of Vermont - Waterbury VT - June 2009 to October 2009  
Responsibilities  
Tasks included completing water testing on samples brought into the lab equipment calibration making reagents filling orders cleaning glassware training staff and using Sample Master / Lims (software) for data entry. Daily water quality tests included alkalinity chlorophyll coliform conductivity dissolved oxygen pH total suspended solids turbidity and total phosphorus. Some experience with carbonyl compounds total petroleum hydrocarbons (diesel range) volatile organics and volatile organics (gasoline range).  
EDUCATION  
MS in Biological Sciences  
Nova Southeastern University - Dania Beach FL  
2011 to 2014  
BS in Natural Resources Ecology  
University of Vermont - Burlington VT 2005 to 2009  
SKILLS  
Microbiome Analysis (2 years) Genomic Sequencing (2 years) Clinical Research (2 years) PCR (3 years) DNA Extraction (2 years) RNA Extraction (2 years) qPCR (1 year) Water Quality Anaylsis (1 year) Microarray Analysis (1 year)  
AWARDS  
President's Faculty Research & Development Grant at Nova Southeastern University 2013  
December 2013  
PUBLICATIONS  
Microbial communities reveal sub-population of the sponge Cinachyrella  
July 2014