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Rose Layton

Passionate research master's student (MRes Molecular Microbiology) graduating from the University of Bath with excellent academic qualifications including first class BSc Honours in Biological Sciences. Specific interests are founded in Arctic microbiology with an emphasis on its role in global warming.

Education

2015-2016 **University of Bath**

MRes Molecular Microbiology (pending). Modules included Phylogenetics and Infection and Immunity, Microbial Evolution and Structural Biology. Two research projects were undertaken spanning crystallography in the development of inhibitors of Chagas disease and genetic engineering of *Geobacillus* sp. for improved biofuel yield.

2011-2014 **Plymouth University**

BSc (Hons) Biological Sciences (1st). Major modules in the final year included Environmental Microbiology, Ecotoxicology, Plant Biotechnology and minor modules of Bacterial Taxonomy and Systematics, Cryo-Electron Microscopy, Scanning Electron Microscopy in Pathology and Nanotechnology. Personal research in 'Experimental evidence for the misuse of the traditional phenoloxidase spectrophotometric assay to infer immunocompetence in invertebrates'.

2008-2010 **Peter Symonds College**

A-Levels: Biology, Chemistry and Environmental Science

AS-Levels: Maths

2003-2008 **Mountbatten School**

12 GCSE's

Research interests, experience and skills

Interests. Having a diverse background in biology, my skills, interests and research experience are correspondingly broad. However, a lifelong passion for global conservation and an intrigue in the 'invisible' world has manifested a particular interest in linking molecular changes in Arctic microbial communities with the abiotic changes occurring as a result of global warming.

Experience. My laboratory research experience includes an awarded studentship in molecular plant biology (Plymouth University), microbial research projects at both graduate and undergraduate level and work experience at the bacteriology and virology laboratories of Kings College hospital, London. During my postgraduate career, I delivered a number of seminars and wrote for a science outreach magazine. Finally, I have field work experience in water sampling of lake and bathing water (Azores).

Laboratory skills. I possess optimal skills in conventional microbial techniques (liquid and solid culture of bacteria, light microscopy), molecular biology techniques (PCR, RT-PCR, primer design, DNA knockout, DNA isolation from culture, restriction digests) and chromatographic techniques

(High profile, immobilized metal affinity and ion exchange chromatography). I have good experience with crystallography, electron microscopy and UV-spectroscopy. Good background knowledge in the methods used to study diversity and function of microbial communities using NGS and 'meta-omics'.

Computer skills. Key competencies include the full Microsoft office suite, statistical software (Minitab, SPSS), Imaging (SigmaPlot, Excel, ImageJ), bioinformatics software (MEGA, Seaview) and other bioinformatics tools (Blast, ClustalW), molecular modelling software (Coot, Phenix, PyMOL).

References

Available upon request