

***Project title -Animal to human disease: a public health safety issue, an investigation into the zoonotic transmission of infectious pathogenic microbial species***

***Supervisor – Dr Mary Garvey***

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***Project overview –***

The prevention and control of veterinary related infections is an important aspect of public health and safety due to the occurrence of zoonotic disease. Zoonotic diseases are those which are passed from animal hosts to humans via personal contact or consumption of animal based food products. Veterinary clinics are a connection of human and animal interaction, often in situations dealing with infected wounds or faecal matter. The spread of pathogenic species within veterinary practices can lead to infection of both the housed animals and veterinary staff. Furthermore, food-borne zoonotic diseases are a significant and widespread global public health threat. Factors associated with the increase of zoonotic disease transmission are associated with increased antibiotic resistance of species, emerging resistance of species to biocides used for disinfection and microbial traits such as the formation of protective spores and biofilm communities. The increase in antibiotic resistant strains has meant that the use of surface disinfectants for the control of pathogens in food preparation and veterinary settings increased. Prevention of disease is typically easier and more cost-effective than addressing an outbreak situation. The research study proposed has a number of aims which will assess how to control the spread of pathogenic organisms with the overall aim of preventing zoonotic disease transmission. Aims are designed and structured to provide a detailed understanding of the factors associated with the survival and spread of pathogens and the risks to public health as a consequence of their persistence in the environment. The study proposed will assess microbial species present in veterinary practices where transmission to human hosts is high risk.

**Requirements** – Honours degree in microbiology, veterinary science or a related science discipline is essential, previous laboratory experience and skills are desirable but not essential. Candidates must hold a driving licence.

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