Joint NIHR/BAD Research Taster Bursary Report- Abby Macbeth

May I take this opportunity to thank the National Institute for Health Research members and the British Association of Dermatologists research sub-committee for the award of one of the Joint NIHR/BAD Research Taster Bursaries. I am most grateful for this opportunity.

The bursary has provided funding for a two-week attachment to the hair research group at the Centre for Skin Sciences in Bradford under the supervision of Professor Desmond Tobin.

Professor Tobin and his group have a special interest in the field of hair research and I was keen to see firsthand techniques available for potential future joint clinical and basic science protocol development. I was fortunate to observe and participate in the preparation and maintenance of hair cultures, from the arrival of the skin sample to antibody labelling and imaging thereafter. The hair follicle culture was my main area of interest in the work being carried out in Bradford and it was fascinating to observe and consider potential applications of this technique within translational hair research.

Within the two-week laboratory attachment I also observed fibroblast, melanocyte and keratinocyte cultures and maintenance and feeding thereof under stringent aseptic conditions. I was also fortunate to observe and participate in frozen sectioning of cultured hair follicles, indirect labelling of antibodies, trypsining plates of cell cultures and UV irradiation of cell lines along with general laboratory tasks such as preparation of pre-determined culture media.

Within the second week in the laboratory I gained experience of RT-PCR, Western blotting/SDS-Page and confocal microscopy. Basic lessons in laboratory etiquette, for example waste disposal and storage of media and reagents, which were not apparent having only worked in clinical medicine previously, were learnt rapidly and will be forever useful.

The placement has opened my eyes to the challenges of scientific research, for example lack of availability of human tissue samples, and has increased my depth of understanding of the hair follicle as a subunit of the skin. Also with practical experience of some of the more commonly used laboratory techniques I now feel empowered to read (and understand) more technical scientific papers and apply these findings to clinical practice.

As I am at an early stage in developing a combined clinical and academic career in dermatology this experience has been invaluable and has not only broadened my research horizons but has also reinforced the need to pursue clinical uncertainties in the field of hair disorders via translational research.

I would again like to thank you for this opportunity.

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