

24th July, 2017

Report on research activities facilitated by Lions Club donations

Previous donations from the Lions Club funded the purchase of a **Tecan Infinite M1000 PRO** multifunction plate reader. This high-end piece of equipment allows us to analyse colour reactions, fluorescence and luminescence, which are common end-points for a wide range of assays conducted in the lab. In the past, these different end points were measured on different pieces of equipment, often in different physical locations. Moreover, it is quicker and more accurate and reliable than most other machines we have used in the past. Thus, the impact of this new machine on efficiency and quality cannot be overstated.

The machine is now used on a daily basis and the research activities in the lab have been greatly improved by it. We have also started using it to develop completely new assays, which has been exciting and potentially very rewarding for us. A number of publications from the lab have also been facilitated by this machine (see below). This year, the machine has contributed to two new student projects on lupus and scleroderma, which have generated some very exciting results. In addition, the machine is currently helping us with a rheumatoid arthritis project funded by Abbvie and a project looking at severe asthma, which is a collaboration with a group at the University of Technology, Sydney. This work has led to joint grant applications (NHMRC) and is likely to result in new publications soon. Other groups working on a wide range of inflammatory and autoimmune diseases also have access to it. Thus, as well as having a very significant impact on the work of our lab, the equipment is becoming a vital component of the wider research activities at the MHTP, greatly increasing its impact.

It is our hope that future donations from the Lions Club will go toward the purchase of a new laminar flow hood (also known as a biosafety cabinet). This is a standard piece of tissue culture lab equipment that allows us to work with biological material in a sterile environment – essential for all of our daily activities. We currently have two of these hoods, but as our lab has expanded over the last year, we need access to another one. There are plans for our lab to move into a neighbouring building to occupy a larger lab space. This was due to happen in the last year, but has been postponed until next year. Thus, the ideal time to get a new hood would be at the same time as the move.

We would like to thank the Lions Club for their continued support of our research activities. This support makes a real difference to us and hopefully, in the future, will lead to better outcomes for patients.

Recent publications assisted by Lions Club donations

Godsell, J., Rudloff, I., Kandane-Rathnayake, R., Hoi, A., Nold, M. F., Morand, E. F. & Harris, J. (2016). Clinical associations of IL-10 and IL-37 in systemic lupus erythematosus. *Scientific Reports* **6**, 34604.

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