EXPERIENCE FROM AN AMERICAN ASSOCIATION FOR THORACIC SURGERY FOUNDATION FOR THORACIC SURGERY TRAINING

FELLOWSHIP: LUNG TRANSPLANTATION IN TORONTO GENERAL HOSPITAL

To the Editor:

Because I (D.T.) am extremely interested in lung transplantation, I applied for an American Association for Thoracic Surgery (AATS) Graham Foundation for Thoracic Surgery Training Fellowship. The goal of this fellowship is to provide an international training and educational experience for young thoracic surgeons from mainland China by having them spend a focused period of between 1 month and 1 year studying clinical techniques at a host training site in North America. Thanks to recommendation from Dr Hiroshi Date, chief of the thoracic surgery department at the Kyoto University Hospital, and acceptance by Dr Shaf Keshavjee, surgeon in chief of the University Health Network, I was fortunate to be selected by the AATS Graham Foundation to receive a Thoracic Surgery Training Fellowship, which took place with Dr Shaf Keshavjee at Toronto General Hospital (TGH) from January to March 2018.

TGH has a history of turning heparin, insulin, and pacemakers into world firsts. Beginning with the world's first successful lung transplant in 1983 and continuing with the first successful double-lung transplant in 1986,^{1,2} the Lung Transplantation Program has completed more than 2000 lung transplants. In 2017 alone, about 170 lung transplants were completed at TGH, with only about 3% mortality. Dr Shaf Keshavjee has been part of many firsts of lung transplantation history at TGH. His development of a lung preservation solution that boosted the patient survival for single-lung transplants from 50% to more than 90%—is now a world standard. Another innovation of his team was the technique of ex vivo lung perfusion (EVLP), which allows lungs to be preserved at body temperature for 12 to 18 hours.³ With the advent of EVLP, marginal donor lungs can be monitored and assessed individually to help transplant surgeons select lungs that are suitable for transplantation.⁴ In February, the American Society of Transplantation awarded the Toronto Lung Transplant Program the American Society of Transplantation Innovation Award for 2018 for the clinical translation of EVLP.

I visited Dr Keshavjee in his office when I arrived at Toronto (Figure 1). He asked me many details about what I wanted to learn in TGH and gave me great encouragement and suggestions for my future research plan about lung transplantation. In addition, we talked about the current

FIGURE 1. Shaf Keshavjee, MD, MSc, FRCSC, FACS (left), and Dong Tian, MD (right).

situation of lung transplantation in China. I felt that Dr Keshavjee was an example of just what my future aspirations are.

I started my fellowship when I left Dr Keshavjee's office. Studying in the Lung Transplantation Program, I experienced an unusually busy 2-month period. I shadowed Lung Transplantation Program fellows and observed about 5 lung retrievals (both donor after cardiac death and donor after brain death organs) and 15 single-lung and double lung transplants. I joined 20 meetings and lectures, looked around the medical surgical intensive care unit and general ward, observed EVLP procedures, and so on. I also visited the Latner Thoracic Surgery Research Laboratory, where I was able to observe the Lung Transplantation Program's translational research efforts involving animal lung transplantation. I gained a lot of knowledge of lung transplantation from staff surgeons and fellows during the 2-month experience. More importantly, I am more interested in lung transplantation than ever before. That enthusiasm will be important in my future time at The University of Tokyo Hospital as a PhD researcher.

In conclusion, I am very grateful to the AATS Graham Foundation for Thoracic Surgery Training Fellowship for providing me this great opportunity to visit TGH. I would like to point out that this fellowship really gave me so many wonderful treasures in TGH, and an unforgettable experience. I thank Dr Keshavjee and his lung

S.K. is Chief Scientific Officer of Perfusix Canada and XOR Labs Toronto. D.T. has nothing to disclose with regard to commercial support.

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The Thoracic Surgery Training Fellowship was funded by American Association for Thoracic Surgery.

transplantation team for this valuable learning opportunity and for giving me a lot of support during this fellowship.

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<https://doi.org/10.1016/j.jtcvs.2018.04.036>