Obituary for Frederick E Hargreave (1938-2011)

Frederick E (Freddy) Hargreave died unexpectedly on 15th June 2011. He was born in Hong Kong and completed his medical school training at the University of Leeds in the United Kingdom. After completing his initial clinical training, Freddy moved to London, where he began his research training with Professor Jack Pepys at the Brompton Hospital. During this time, Freddy described a new clinical entity, Bird Fancier’s lung disease, a type of allergic alveolitis caused by the inhalation of bird antigens.

Freddy Hargreave joined the Department of Medicine at McMaster University in 1969. He was based at the Firestone Institute for Respiratory Health at St. Joseph’s Hospital, where he spent his entire career in Canada. Shortly after arriving in Hamilton, he started what was to become a lifelong collaboration and close friendship with Dr. Jerry Dolovich and their focus turned to understanding the mechanisms of and the treatment of asthma. Within 10 years, the studies led by Freddy Hargreave had changed the way that asthma was diagnosed, and had paved the way to future studies which have revolutionized its treatment. In particular, his laboratory described the methodology for the measurement of a pivotal feature of asthma, termed airway hyperresponsiveness, and demonstrated that this was present in all patients with current symptoms of asthma. This test is now the established way to diagnose asthma in patients in whom the diagnosis is uncertain.

In the early 1980’s, the importance of persistent airway inflammation in the pathogenesis of asthma became apparent. The type of inflammatory response differed from patient to patient and was difficult to measure, because it required an invasive test and could not be done routinely. The brilliance of Freddy Hargreave’s research was that it was always focused at directly solving patient related issues, and he recognized that the non-invasive measurement of airway inflammation was a critical step in the evaluation and treatment of patients with difficult-to-treat asthma. This resulted in the development of the methodology for sputum induction and measurement of inflammatory cells in sputum. Almost immediately, this resulted in the identification of a new syndrome of persistent eosinophilic airway inflammation in the absence of asthma, which accounts for about 20% of patient referrals, with chronic persistent cough, to respiratory clinics.
The methods that the Hargreave laboratory developed are now considered the gold-standard, and used as a research tool in all laboratories, which conduct clinical research in asthma; however, from extensive experience in measuring sputum inflammatory cells in the clinical setting, Freddy was convinced of its added value in the everyday management of difficult-to-control asthma. Clinical trials comparing standard guideline directed management of asthma to a management scheme which added the routine measurement of induced sputum, showed a dramatic advantage of adding the sputum method in reducing the risks of severe asthma exacerbations and also in determining the appropriate doses of medications to manage these patients.

Freddy Hargreave’s brilliance as a clinical scientist was only eclipsed by his skills as a mentor. Almost all of the research leaders in asthma in Canada have trained at his laboratory at the Firestone Institute, and his previous fellows are research leaders in more than 20 countries. His honesty, integrity and precision in research were legendary and he tried to impart these qualities to every trainee that flocked to train with him from all parts of the world. His research was driven entirely by the clinical needs of his patients and epitomized translational research. Every observation directly led to improved health of his patients. He rejoiced, not from his over 300 publications in high impact journals, but from the recognition of his grateful patients and successes of his trainees.

McMaster University, the city of Hamilton, the Canadian respiratory community and the international scientific community have lost an extraordinary physician, humanitarian, and clinician scientist. His untimely death has deprived physicians and scientists across the world of a trusted colleague, friend and mentor. His wife, Alix, his children Clare, Erica and Peter and his grandchildren have lost a devoted husband, a loving and caring father and an affectionate grandfather. Despite his world class accomplishments, he did not care for titles, accolades or his own advancement. To his patients, he was not Dr. Hargreave, but Freddy - the doctor and friend who wore shorts, sandals and knee high socks, even in the depth of winter. He cared genuinely, and in everything he did he brought a level of decency, caring and attention, that was unmatched.

Paul M O’Byrne MB, FRCP(C), FRSC

Parameswaran Nair MB, PhD, FRCP(C)

Firestone Institute for Respiratory Health,

St. Joseph’s Healthcare,

Hamilton, Ontario.