

St. Michael's Hospital

Research activity at St. Michael's Hospital continues to focus on the upper airway in Laryngology and Rhinology emphasized under the leadership of Dr. Jennifer Anderson and Dr. John Lee.

Of particular note, we wish to welcome William To, our new research assistant who has been very involved in our endeavours and instrumental in setting up the new nasal physiology laboratory.

Voice and Upper Airway Laboratory Jennifer Anderson

A new project to develop a microlaryngeal surgical simulator was initiated by Dr. Theresa Holler and Dr. Jennifer Anderson. A pilot project was conducted during the laboratory session of the Fifth Toronto Voice Course which was successfully held this year in February. Two grants have been awarded for the project including \$12,000 from St. Michael's Hospital Alternate Funding Plan Innovation Grants, and a second submitted by one of our residents, Dr. Kayvan Nateghifard for \$5000 from the Harry Barberian awards. The simulator is to be further tested during laryngology core sessions this fall.

In the voice laboratory, we are in the middle of data collection for a combined project with the Faculty of Music on the effects of external vibration on singers and muscle tension dysphonia. This project is led by Dr. Jennifer Anderson along with Mary Enid Haines from the Faculty of Music and both speech pathologists from St. Michael's Hospital; Marta DeLuca and Gwen Merrick are involved.

Dr. Tulika Shinghal, a University of Toronto graduate and the Laryngology fellow this year, participated in several projects. Dr. Shinghal presented the results of a medical imaging study on the 'Effects of Medialization Thyroplasty on Airway Anatomy: Cadaver Model' at COSM in Boston 2015 and the resulting manuscript has been accepted for publication in the Journal of Voice.

A related study was completed on 'Evaluation of a predictive model for silastic implant design' which was presented at the Voice Symposium in Philadelphia in June 2015 and the work is in the manuscript preparation phase.

Dr. Shinghal also presented a poster on 'Safety of Outpatient Thyroidectomy' at the Canadian Society of Otolaryngology-Head & Neck Surgery meeting in Winnipeg in June 2015.

Rhinology Research

John Lee

The past year has been an exciting year of rhinologic research at SMH. At the American Rhinologic Society Meeting at COSM, we presented the first study to demonstrate a correlation between nNO levels and the health of sinus mucosa in patients with nasal polyposis. With a recent publication in the International Forum of Allergy and Rhinology, we hope to build on this exciting data with a translational research project with one of our basic science colleagues at SMH. This study will be spearheaded by our resident, Dr. Jonathan Yip and supported by a Harry Barberian Grant.

At the Canadian Society of Otolaryngology-Head & Neck Surgery annual meeting, Dr. Gordon Tsang was chosen to present at the Poliquin Resident's competition on his study investigating the psychological morbidity of waiting for sinus surgery. Using a mixed methods approach, we hope that the results of this paper will provide further insight into how our patients experience this illness and its subsequent treatment.

A number of multi-institutional studies have been ongoing this past year with a range of topics including inverted papillomas, csf leaks, and the management of epistaxis in HHT patients. There are always a number of opportunities for residents to participate if they are interested.

Finally, we are excited to announce that the nasal physiology laboratory is up and running at SMH. We are currently piloting patients with various rhinologic conditions through measurements of nasal airflow, resistance, and olfaction. We hope to add a portable nNO detector to this lab in the near future. A special thanks to William To, our new research coordinator, who has been instrumental in getting this lab off the ground.