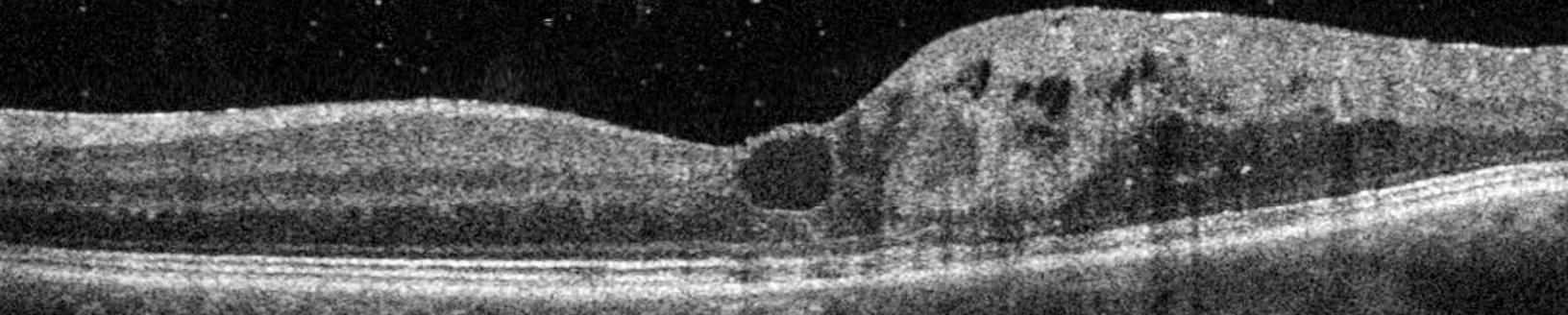


focus



Greetings, friends and family of the Queen's Department of Ophthalmology! As another year draws to a close, we welcome the opportunity to share some news from our department over the last year.

Department News

This year, Dr Martin ten Hove was re-appointed as department head through 2022. The department also underwent its review process with the Royal College, which it passed with flying colours. There are plans for expansion, as the department looks to add several faculty positions over the next few years. Again, this year the department has had a locum position, currently held by one of the Queen's ophthalmology graduates from the spring, Dr Sarah Simpson. The department has also added a part-time ocularist, Mike Webb.

Education

NEW SIM LAB FEATURES

As many alumni are already aware, the department completely refurbished its surgical teaching wetlab in 2015. Since then, residents have been able to practice all aspects of ophthalmic surgery, including phacoemulsification, using one of two operating microscopes. The space is equipped with a large television, computer, phacoemulsification unit, new microsurgical instruments, 3D printer, pathology microscopes, and an autoclave for sterilizing instruments. Residents are able to practice using real cadaver eyes, or using artificial eyes

specifically geared toward practicing cataract or strabismus surgery.

The department is thrilled to report that in the past month it has been able to add two "tabletop" operating microscopes to the surgical teaching wetlab. Both of these microscopes have an attached monitor allowing the instructor to view surgeries in real-time and in high definition in order to provide feedback.



These microscopes were purchased entirely with generous donations from Queen's Ophthalmology alumni; the department wishes to sincerely thank all those who contributed to this great cause! Now with a total of four operating microscopes, all with video projection, Queen's Ophthalmology's surgical teaching centre is the most innovative in Canada.



Above Left: (left to right) Drs Qossay Atwan, Tom Gonder Manny Bal, Alan Cruess, Gaurav Shah, Tien Wong, Sanjay Sharma, and Adil Bhatti. **Above Right:** Dr Alan Cruess taking questions from the audience, as Dr Sharma looks on.



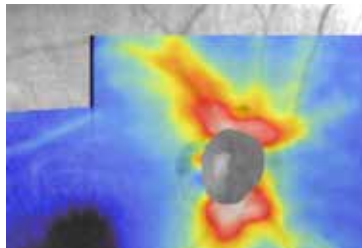
ROSEN DAY

One of the highlights of the department's academic year is the annual Rosen Day Symposium. This year, it covered retina to a sell-out crowd, boasting the highest attendance in the history of the event. The department welcomed Dr Tien Wong from the Singapore National Eye Centre, Dr Gaurav Shah from the Retina Institute in the US, and Queen's Ophthalmology alumnus and former department head Dr Alan Cruess. Program directors Drs Sanjay Sharma and Tom Gonder compiled a jam-packed programme with the help of our retina locum Dr Manpartap Bal, and our retina fellows Drs Qossay Atwan and Adil Bhatti.

Next year's Rosen Day will be led by Dr Todd Urton, covering the topic of Uveitis. It will be held on the 24th of May at the beautiful Isabel Bader Centre for the Performing Arts.

NEW GLAUCOMA FELLOWSHIP

In the summer of 2019 the department will be starting a glaucoma fellowship programme. The programme will be led by Drs Rob Campbell and Delan Jinapriya, and will join the seven other Canadian Academic Departments offering such a program in Canada. This fellowship follows in the footsteps of the medical retina fellowship which we have been running for the last eight years.



ECHO360

Last year the department began using a cloud-based learning platform to record and catalog the resident teaching seminars, as well as the Ophthalmic Technician and Technologist programmes offered in the department. Over the summer, this programme was expanded to include recording grand rounds as well. Very soon, a web-based live-stream of these events will be available for alumni and friends of the department to tune-in. Check out the department website for information, or to be involved in the beta-release.



A recorded Grand Rounds lecture captured on the Echo360 platform.

MSCOPE-OPHTHALMIC PATHOLOGY E-LEARNING PLATFORM

A team at Queen's Ophthalmology (Jim Farmer, Isabella Irrcher, Rob Ewart, and Hassan Hasari) are working on an innovative digital platform for the teaching and dissemination of knowledge in the discipline of ophthalmic pathology. In conjunction with Aurora mScope (the company providing the online digital platform base), they are developing a series of case-based modules incorporating clinical and histopathological images that will allow the learners to actively participate in elucidating findings and diagnoses that are important learning objectives in ophthalmology for both CBME and fellowship examinations. This platform also has the potential as an instructional tool for Anatomical Pathology residents in their ophthalmic pathology training, as well as CME for practicing ophthalmologists and pathologists.



Clinical

EXPANDING TELEOPHTHALMOLOGY

Teleophthalmology started last year and is now expanding to include consultation requests by optometrists. Multiple members of the department are embarking on initiatives to use teleophthalmology to transform how they deliver ocular health services to patients. Dr Isabella Irrcher is spearheading a multidisciplinary team hoping to investigate this new approach as compared to the traditional model of a clinical visit for diagnostics and doctor consultation.



A model eye used in the validation of the drone slit lamp ahead of deployment to Moose Factory, Ontario.

NEW IOL MASTER 700

The department recently updated its biometry unit to the Zeiss IOL Master 700, which builds on strengths of previous models with additional measurements such as total keratometry (measuring the front and back surfaces of the cornea) and macular OCT. In addition to more accurate measurements of ocular parameters, the unit also allows for the use of 4th generation IOL formulas. While evaluating the device, technical staff were impressed with the unit and noted that it penetrated even the densest of cataracts. This new unit is expected to improve accuracy of IOL prediction in all patients undergoing cataract surgery. It will be especially useful in patients receiving premium IOL surgery (TORIC, extended focus, trifocal), where minimizing postoperative refractive surprises is of paramount importance.

The department would like to extend sincere gratitude to local Lions Clubs for their extremely generous donations that were put towards this unit. It is with such generous contributions from the community that this sort of cutting edge technology can continue to be offered to local patients.



Dr Mark Bona explaining tablet accessibility tools to a low vision patient

LOW VISION

The Vision Rehabilitation Service has grown to include a full complement of diagnostic and functional tests as well as an in-house occupational therapist, Julia Foster, stemming from a formalized partnership with the SELHIN. The service continues to work with Vision Loss Rehabilitation Ontario (a division of the CNIB) in support of the South East Vision Rehabilitation Service (SOVRS), to help standardize the referral, assessment, and delivery of vision rehabilitation services to low vision patients across the region.

The regionalized model continues to grow; two satellite clinics have been established in Family Health Team offices in Sharbot Lake and Brockville. There is also now a dedicated research coordinator, Karen Eden, spearheading a number of research projects assessing the delivery and impact of vision rehabilitation services.



Above: The SOVRS assessment lane, Hotel Dieu Hospital site **Below:** Zeiss IOL Master 700



Research

RESEARCH DAY

The department continues to have a rigorous research programme, particularly in resident education. One of the highlights of the research year is Research Day, where all residents present on their current research projects. This year, the Research Day winners were Dr Jacob Rullo for his work on intraocular antibodies and vascular diseases of the eye, and Dr Mark Xu for his work on the effectiveness of smartphone-based ophthalmoscopy. Dr Lisa Jagan was the runner up for her work on a novel strabismus model for surgical education (which you will be able to read more about below). Dr Thomas Oetting from the University of Iowa was the our guest adjudicator and lecturer.



Dr Thomas Oetting



Dr Jacob Rullo

RESIDENT AWARDS

Following on their respective successes at Research Day, Drs Rullo and Xu have both secured exciting research funding. Dr Rullo was awarded the Clinician-Scientist Emerging Leader award from the Foundation Fighting Blindness for his work on AMD. Dr Xu was awarded a Resident Research Grant from PSI for his continuing work on smartphone-based ophthalmoscopy in medical education.



Dr Mark Xu

STRABISMUS MODEL FOR EDUCATION

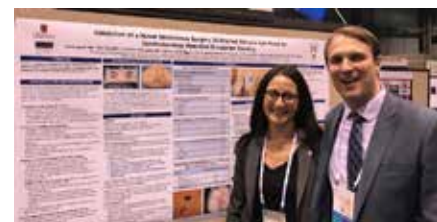
At the beginning of the year, Drs Yi Ning Strube and Lisa Jagan (PGY-4), in collaboration with Dr Kenneth Wright (University of Southern California) and Dr Will Turk (PGY-5 University of Manitoba), delivered an advanced surgical skills course as part of the Wright Strabismus Surgery Course using a novel 3D-printed silicone strabismus surgery model developed by Drs Turk and Strube. Data collected from this course was used as part of Dr Jagan's resident research study (mentioned above) evaluating the validity of the model for teaching and learning strabismus surgery.

Continuing study of this model, and strabismus surgery curriculum development are underway, and Dr Strube's team were recently awarded a SEAMO Endowed Scholarship and Education Fund. The results from Drs Jagan and Strube's study were presented at the 2018 AAO Annual Meeting in Chicago, earning a designation as one of the best posters for the meeting. The model and curriculum development has received interest from ophthalmology programs world-wide, including ORBIS, and the World Congress of Paediatric Ophthalmology and Strabismus. Stay tuned for more exciting developments in 2019!



The 3D model being used in a surgical skills course.

At the meeting this year, Dr. Strube was also recognized with an AAO Achievement Award, for her years of contributions to the Academy, including her role as Course Director of the Strabismus Surgery Skills Transfer Course and Lab, which has been running since 2012.



Dr Yi Ning Strube and Dr Will Turk at the AAO Annual Meeting

RESEARCH LANE JM6

The department recently received approval to install a new research lane next to the Jean Mance-6 ophthalmology clinics.

This lane is designed to meet the specifications to accommodate sponsored and investigator-initiated clinical studies in all subspecialty fields. It is anticipated that the construction will begin soon. Stay tuned for more details!

International Outreach

CZECH REPUBLIC

In the early fall of 2018, Dr. Vladimír Kratky was again invited to Prague, Czech Republic, as a visiting professor-surgeon by the Department of Ophthalmology at the 1st Medical Faculty Hospital (UVN) of Charles University. This was a continuation of the work he had started during his first sabbatical leave in the spring of 2017 which involved starting up an Ophthalmic Plastic Surgery program for their residency.



Dr Vlad Kratky lecturing at Charles University

His activities included running sub-specialty clinics with the residents, setting up a minor surgi-suite and operating in the main OR. In addition, he was asked to give guest lectures at a number of national meetings and to hold skills-transfer courses for local ophthalmologists.

Overall, Dr. Kratky found that the level of Czech ophthalmology was on par with the West and even cutting-edge in refractive and cataract surgery. Oculoplastics, however, lags behind, with most eyelid surgery still being done by plastic surgery and tear ducts by ENT. Orbital tumours are shared by neurosurgery and maxilla-facial service. Dr. Kratky's long-term goal is to develop a two-way relationship between the two universities and hospitals, and to expedite exchange of residents as part of the international electives experience between Canada and Europe.



Dr Vlad Kratky demonstrates a procedure to Czech ophthalmology residents



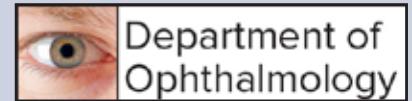
We have a new look...

We recently updated our website; www.ophthalmology.queensu.ca

It now includes more information and resources. Please visit to learn more about some of the new medical education platforms mentioned in this newsletter, or simply to keep in touch, or keep up to date!



Queen's
UNIVERSITY



Kingston Health
Sciences Centre

Centre des sciences de
la santé de Kingston



Hospital
Diana
Hospital

KCH

Kingston
General
Hospital



Rosen Day
Uveitis
Friday 24 May 2019



Todd Urton, Course Director

**We look forward to welcoming
you to the 15th Annual Rosen
Day Symposium on Uveitis.**