It is hard to believe, but this is the 4th edition of The Pedicle. Over the past 4 years, there have been many changes within the UBC Division of Plastic Surgery, and the Pedicle has become the format for information. Dr. Jugpal Arneja deserves kudos for his commitment to creating a newsletter that is informative and thoughtful.

This past year definitely presented some challenges to those of us practicing within the Division. The Burns Plastics Unit has been the home of plastic surgery at VGH for the last 20 years, and the place where many of you were trained. Early last year we were informed of the hospital’s desire to create a High Acuity Unit in this space, and move plastic surgery patients to another area. We attempted to explain our opposition to this move in a clear way backed by the literature, and many of you contributed your voices to that opposition, and I thank you for that. The plan proceeded, nonetheless, and the unit has been renamed the BC Professional Firefighters Burn, Trauma and High Acuity Unit. Burn patients will continue to be cared for on the unit. Plastic surgery patients are now housed elsewhere.

Although this was a difficult time, a number of positives have come out of it. Firstly, I have had a number of meetings recently with our hospital administration where they confirmed their commitment to build a new Burns and Plastic Unit. A steering committee has been struck to start the planning of this exciting new chapter for the division and the patients we treat. Also, our relationship with the BC Professional Fire Fighters remains very strong, and we have also been involved in the recent opening of the BC Professional Fire Fighters Burn Fund Centre, which is a dedicated building for the Burn Fund which also has accommodations for patients and their families. This is a unique building within North America, and one which the BC Professional Fire Fighters are justifiably proud of. The Division continues to thrive in other areas. We created an internal Academic Research Grant fund, and 7 members were successful applicants for grants last year. The clinical research program continues to thrive at both the adult and BC Children’s Hospital under the guidance of Drs. Sheina Macadam and Erin Brown. The Burn and Wound Healing Lab under Dr. Aziz Ghahary also continues to be extremely productive, and has just completed the first Phase 1 drug trial in the history of the Department of Surgery.

Within the residency program, there are changes on the horizon as all programs move towards Competency Based Training. Dr. Mark Hill is leading the program as we embark on this initiative. Our graduating residents last year (Drs. Adelyn Ho and Sheena Sikora) were both successful at their Royal College Examinations, and are currently doing fellowships in Los Angeles and Australia respectively.

Our fellowship programs continue to develop under the guidance of Dr. Erin Brown, and we will offer two breast reconstruction fellowships starting this summer. To date, we have trained fellows from 9 countries and most provinces in the various fellowships. The Dr. Patricia Clugston Chair endowment of $5 Million was realized this past year, with a final further gift of $200,000 from the UBC plastic surgeons helping achieve the goal. The recruitment process continues, and we hope to have the position filled in the next few months. Our division members continue to contribute on many levels. Dr. Nick Carr finished his tenure as President of CSAPS, and chaired a successful meeting in Montreal. A number of members serve on committees in CSPS, ASPS and ASAPS as well.

Despite some difficult times this past year, I firmly believe the division is in a stronger position than ever, and I look forward to the next few years of ongoing growth and development. I hope you enjoy this edition of The Pedicle.
Volunteerism

On Saturday September 26th, 2015 after an early morning breakfast in San Antonio Texas, I went to a small airport, got into a private plane and took off, bound for Louisiana. The pilot was Jim Grotting, past visiting professor at UBC and the current ASAPS president; two old guys on an adventure! After stopping in New Orleans for a lunch of Cajun gumbo, we headed north over the Mississippi delta into the American Deep South, eventually landing at an airstrip near Lake Martin Alabama. That’s where we met up with our wives who were staying at the Grotting’s lake house and with whom we then sat down for dinner. Three meals in three cities - what a day! Obviously, this little story begs a simple question - how did all that happen? And the answer can be found in one word: volunteerism.

Like most young surgeons, when I began practice, it was survival mode. My professional intentions did not extend much beyond taking call, trying to get better at surgery, paying the bills and raising a young family. However, surgeons are restless people and at some point, most of us start looking for personal fulfillment away from our daily career. Many of us focus on our families, volunteering at our children’s school or coaching youth sports. Others will turn to a hobby or a sport. We all know surgeon golfers who have little spare time for anything else. Some of us volunteer for hospital committees or local medical societies, while others take their skills on the road with surgical missions to the third world. In my case, it all started when someone asked me to join the ASPS young plastic surgeons’ committee (for those under 40). Suddenly I was attending meetings with a group of like-minded young surgeons, several of whom were destined to become international leaders in our field. In short order, the same thing happened with the Canadian and American Aesthetic Societies, the Northwest Society and the Royal College. It became apparent that, in medicine, if you raise your head even slightly, people come calling. Driven by volunteer labour, most professional organizations are looking for help and the willingness to serve is the single most important ingredient.

Naysayers might argue that volunteering at work is a low yield enterprise; a good friend once told me the first thing you learn in the British Army is to never volunteer for anything! The difference in medicine is that the rewards of volunteerism are just too good to ignore. For many surgeons, third world missions have been a life changing experience. Similarly I have found that volunteering with our professional organizations, while a seemingly banal activity, can actually change your life. First, there is the personal enrichment that comes from working with others at the national level. PEARLS & PERSPECTIVES

Richard J. Warren, MD, FRCSC
and international level. Making a difference in the way things are done can be a heady experience and it puts our own problems back home into perspective. Second, by venturing beyond our personal comfort zone we test ourselves and we extend our horizons. Repeatedly we are forced to rise to the occasion and we gradually become part of something that is bigger than ourselves. Lastly, we come in contact with some outstanding people who, despite differences in geography or nationality, are usually dealing with issues just like our own. We can learn so much from these colleagues, but the real payoff is our shared experiences which build friendships that last a lifetime. I now count among my best friends a number of surgeons in different corners of the world who I met through involvement with professional societies. A ‘phone call or a message to one of these personal contacts can open doors that would otherwise be impenetrable. Had I not gone down the volunteering road, I would never have gotten to know these fascinating people. One thing’s for sure, without committing to an organization like ASAPS, I never would have found myself in a light plane flying along the Texas Gulf coast one sunny day last September.

WHERE DID YOU DO MEDICAL SCHOOL, RESIDENCY, FELLOWSHIPS AND ANY OTHER DEGREES? WHAT ARE YOUR AREAS OF CLINICAL AND RESEARCH INTEREST?
After completing my Medical Degree in London I undertook general surgical training and subsequently a PhD in Molecular Medicine in Oxford. I went onto Plastic Surgery Residency in the South West of England. In 2012 I came to Vancouver for Fellowships in Breast Reconstruction and Research, and after a locum with the UBC Division I was appointed on staff in October 2014. My primary specialist clinical and research interests are now in Breast and Microsurgical Reconstruction, including a CBCF-funded investigation into the development of BRCA-related cancer whilst waiting for surgical prophylaxis. I am the proud mother of two children aged 4 and 6, and equally proud holder of the record for the Snow-Shoe Grind.

WHAT DO YOU SEE IS THE GREATEST CHALLENGE YOU HAVE FACED IN STARTING PRACTICE AND HOW DID YOU ENDEAVOR TO MANAGE IT?
As trainees we are so clinically-focused and almost oblivious to the stresses of running a practice. I was fortunate to become very busy very quickly but this presented a challenge in managing both time and the volume. With joining a supportive office and finding a fabulous MOA I was able to improve my workday efficiency, get home and worry (slightly) less about cases in my sleep! Fortuitously, as for many surgeon-parents, my children quickly became very good at sitting still and colouring at the nursing station.

WHAT ADVICE WOULD YOU GIVE CURRENT RESIDENTS AND FELLOWS ABOUT THE TRANSITION TO PRACTICE?
Reach out to mentors and accept their advice. Try to remember to thank them (and your spouse) for their help and guidance. Repeat.

WHERE DO YOU SEE THE PRACTICE OF MEDICINE GOING OVER THE COURSE OF YOUR CAREER AND WHAT OPERATION DO YOU THINK WE WILL NOT BE DOING IN THE FUTURE THAT WE ARE DOING NOW?
The pressure will continue from both patients and medial economists to progressively sub-specialize. Whilst this improves outcomes, I think retention of transferable skills and ideas fosters training and innovation. I am also mindful that breast cancer may become an increasingly medically managed disease. For these reasons I am glad to keep an element of my practice general and trauma-focused!

While acknowledging the current importance of silicone in my practice, I am surprised we have not yet found a biotechnological alternative. ADMs may have transformed breast reconstruction over the past ten years, but I think they represent a stay of execution for the traditional synthetic implant.
There are many variations of this operation which broadly encompass closed suture techniques and open techniques. Here’s the way I do it (with credit to Quintin Son-Hing).

With the patient upright place upward tension on the pretarsal skin until the lashes start to curl upward. Mark the lower incision line at about 6mm above the lash line. I usually curve it lower medially so it ends inside the epicanthic fold. Release the upward tension and judge the amount of overhang and mark the upper incision. Unless the patient is older and has skin excess, the width of skin resection should be a few mm only. Perform the surgery under LA or LA/sedation. Excise the skin as marked. In Asia, surgeons make the lower incision only and then after anchoring the pretarsal skin and with the patient upright they judge the skin resection. I haven’t found this necessary.

With scissors, sequentially excise pretarsal/preseptal orbicularis just above the lower incision across the entire length of the incision until the upper tarsal plate is exposed. You may find you’ve divided the levator aponeurosis insertion on the tarsus – don’t panic; it’s fine. Decide now if you want to remove any fat. I’ll often take some lateral fat in a heavy lid. If you’re going to do this snip a hole in the septum laterally where you can see the fat and then you can progressively open the septum medially as necessary without fear of injuring the levator.

Place 3 supratarsal fixation (anchor) sutures – one in the line of the pupil and the others about 1 cm either side. I use 6-0 Prolene. Pick up the pretarsal skin; take a bite at the upper border of the tarsus which will tension the pretarsal skin (watch you don’t over rotate the lashes upward); pick up the levator aponeurosis if you disinserted it earlier; pick up the upper skin flap. Close skin with a running stitch. I use a baseball stitch since I think it bleeds less. Remove the sutures at 1 week.

This operation has a high satisfaction rate (you and the patient) and a low complication rate. It’s one of my favourites.
This has been a busy and productive year for our section. We are in the middle of the current Master agreement cycle and it's annual 0.5% fee increases. Last year's allocation went to low paying fees and this year's went to a microsurgery assist fee (live April 1st with luck). We also made a successful submission for a pool of funds allocated for intersectional and interprovincial disparity resulting in a net 8% increase over 3 years. About 30% of that has been used in the first round for low paying facial trauma and other fees with the remaining 70% to be decided by our section over the next 2 years.

There is interest in updating our breast fees, and Adrian Lee spearheaded new fee requests for use of intraoperative SPY technology for flap perfusion, use of biologic material for breast recon (alloderm, veritas, rectus fascia) and finally for immediate reconstruction (surcharge to offset the loss of OR time in letting Gensurg do mastectomies in our block at the start of the case and the additional complexity). We continue to press MSP for correction of the non-revenue-neutrality in our skin graft and flap fees and they are dragging their heels as they owe us a lot by our calculations. I hope to have this resolved by the end of April.

Members have been active in the WCB negotiations which went well for urgent surgery but not for WCB emergencies done after hours. As many sections are affected, there is significant ongoing pressure to resolve this. Adrian Lee continues as our Economics Rep while Doug Courtemanche is back as Secretary Treasurer. I am stepping down after 5 years since we are in a great position overall and it is time for some new ideas and energy.
As we proceed to a New Year, we are constantly trying to improve our Residency experience without forgetting the past year. Competency by Design, a change in the way we teach and assess our residents is coming upon us. We are to start the process in 2017 and be ready to go by 2019, which coincides with our next Royal College Accreditation. We are already beginning preparations for this. Our Microsurgery Lab is gradually improving and we acquired a very modern operating microscope to assist in providing quality instruction. We are waiting to hear from WorkSafe BC about continued support for this fantastic training facility. I would like to thank our clinical faculty from around the province for their support of our residents rotations as well as Drs. Bert Perey, Jeff Pike and Rod French for help in the cadaver labs.

We had a great 2015 Research day. Each year we seem to improve the experience. Once again our residents performed admirably. Tim Marten was our visiting professor and did a great job in attracting attendees as well as providing his personal approach to facial cosmetic surgery. We were delighted to have excellent presentations from our local faculty with a special thanks to Drs. Ken Smith and Paul Oxley. For the first time we presented resident awards for the Best Clinical Paper as well as the Best Burn & Wound Healing Lab Research paper. Morgan Evans and Aaron Knox shared this year’s Best Clinical Paper Award and Saman Pakyari, the Best Burn & Wound Healing Lab Research paper. This year we have another great program planned with our resident presentations, several presentations from local surgeons and Dr. Paul Cederna from University of Michigan in Ann Arbor as our Visiting Professor. We had two other very successful Visiting Professorships this year with Dr. David Naysmith providing inspirational lectures for us and the residents in the fall and Dr. Amanda Gosman, a pediatric plastic surgeon from San Diego in the spring. We now are back to graduating 2 residents per year. In alternate years, we have one clinical spot and one CIP spot. The CIP resident spends their first 2 years in the core program then does 2 years in a Master’s program. They then return to finish their final 3 years. Adelyn Ho was our first CIP resident to complete this program. Graduating last year, she is now doing a fellowship in Microsurgery. Our two graduating residents this year are Jorga Zabojova and Krista Genoway. Jorga is on to our local Aesthetic Fellowship in Kelowna and Krista is off to San Francisco to do a Microsurgery fellowship. Our two new clinical residents accepted from the 2016 CARMS match are Sophie Schlagintweit from U of Toronto and Peter Mankowski from McGill. Peter will be in the CIP program.

Our current residents had a very successful year in the research and presentation arena. In addition to their great presentations at the Research day, CSPS, ABA and the NWSPS, Sheena Sikora won the Bill Knox Award at the Department of Surgery Graduation ceremony.
We were very happy to welcome to the world Diana Song’s (R2) first baby Chloe Forbes. Tyler Omeis (R2) also had a baby boy Aden. Congratulations to both of them and their spouses! This year we mixed in a little fun as usual. Kevin Bush once again hosted a special day at Keats Island for the summer resident retreat. The now annual pre-Christmas dodgeball/billiards and wine tasting event was again a great success. The residents also provided a great night out for the visiting CARMS applicants in February. The resurrected winter resident Ski trip was on again this year and there is rumors that some actual skiing took place this year!
INDUSTRY UPDATE

The KLS Martin Group was founded in 2004 as an umbrella organization representing the following independent, medium-sized companies: KLS Martin LP, Gebrüder Martin GmbH (1923), Karl Leibinger Medizintechnik (1896), Rudolf Buck, Stuckenbrock Medizintechnik, and KLS Martin.

Instrument production began in 1896, and the sales operation in Tuttlingen expanded in 1923 to reach the global market. Sales began first in North America through distribution, but the direct sales company, KLS Martin LP was founded in 1993. Several key innovations were developed in cranio-maxillofacial surgery over the next decade that gave the KLS Martin Group a reputation for innovation and fueled growth of its salesforce and operations in North America.

Nowadays, the Group is represented by sales partners in more than 140 countries. In addition, it has its own sales subsidiaries in Great Britain, France, Italy, The Netherlands, Japan, Australia, Brazil and Malaysia and maintains representative offices in Russia, China and Dubai. The KLS Martin Group is a world leader in specialty markets. For the craniomaxillofacial market it began in 1974 when the Karl Leibinger Medizintechnik factory developed the first ‘miniplate’ with Dr. Maxime Champy. This was the first production of miniaturized plate and screw osteosynthesis, and sparked a new standard of care in facial trauma.

KLS Martin became the market leader in Distraction Osteogenesis beginning with the widely published RED device, and has also become the leader in Resorbable Osteosynthesis with the SonicWeld Rx® system. KLS Martin also developed a unique product called the Sternal Talon for osteosynthesis of the sternum, fulfilling a need for rigid fixation in cardiothoracic surgery. The company continues to focus and invest in the future of osteosynthesis products, with special attention to the three-dimensional individual patient implant solutions (IPS).

KLS Martin LP’s success in North America is due to innovative, high quality products, as well as excellent customer service and local direct sales consultants. Also important is maintaining vital feedback and cooperation with customers and educational groups to improve patient care within specific specialties such as cardiothoracic surgery, neurosurgery, and maxillofacial surgery.
FELLOWSHIP TRAINING HAS BEEN AN INTEGRAL COMPONENT OF UBC PLASTIC SURGERY FOR 20 YEARS.

Over time, the goals of Fellowship training have matured, and the scope of training opportunities have expanded (Breast Reconstruction, Craniofacial Surgery, Hand & Microsurgery, Pediatric Plastic Surgery, Aesthetic & Breast Surgery and Breast Reconstruction Research). The gradual development of these programs has followed the Council on Medical Education of the AMA definition of FELLOWSHIP PROGRAM as: “a form of apprenticeship, which in some cases is indistinguishable from a residency, although it offers a greater opportunity for teaching and for the study of basic sciences and research”. Importantly, these subspecialty programs have been carefully evaluated to ensure that the fellows achieved their goals of training without adversely impacting the educational opportunities of our residents. Given the long history of education excellence within the UBC Division of Plastic Surgery, the development of these fellowship programs reflects the natural evolution of a commitment to training excellent surgeons.

Erin Brown, MD, PhD, FRCSC

2016 Fellows

GERRIT HALBESMA
Craniofacial Fellow, July 1, 2015 to December 31, 2015
Residency: University of Amsterdam

DARIUS BALUMUKA
Paediatric Fellow, July 1, 2015 to June 30th, 2016
Residency: Mbarara University, Uganda

ERIKA HENKELMAN
Paediatric Fellow, January 1, 2015 to August 31, 2016
Residency: Southern Illinois University School of Medicine

MAXIMILIAN EDER
Breast Reconstruction Fellow, July 1, 2015 to December 31, 2015
Residency: University of Munich

KIMBERLY SASS
Hand & Microsurgery Fellow, August 1, 2015 to January 31, 2016
Residency: University of Calgary

CORINNE SCHOUTEN
Breast Reconstruction Fellow, January 1, to June 30, 2016
Residency: VU University Medical Center, Amsterdam

VERONIQUE ST-SUPERY
Craniofacial Fellow, January 1 to June 30, 2016
Residency: University of Montreal

PETER DAVISON
Aesthetic & Breast Fellow in Kelowna, August 1, to December 31, 2015
Residency: Dalhousie University

IAN MAXWELL
Aesthetic Fellowship, Kelowna, January 1, to July 30, 2016
Residency: University of Ottawa
Another year and another set of achievements for the residents and staff of the UBC Division of Plastic Surgery. As a division we published a total of 17 journal articles in peer-reviewed publications. Dr Ghahary and his team began UBC’s first ever non-industry sponsored clinical trial for a drug candidate (FibroStop, an anti-scarring therapeutic agent) discovered at UBC. Additionally, Dr Erin Brown is lead on a multi-center efficacy trial evaluating the Cartiva Synthetic Cartilage Implant for treatment of first CMC osteoarthritis. This is the first industry-sponsored trial of its kind initiated within our division.

Congratulations to our members who continue to enhance the reputation of the UBC Division of Plastic Surgery. We would like to highlight the following individuals:

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<th>RESEARCH AWARDS/ GRANTS:</th>
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<tr>
<td><strong>DR. JUGPAL ARNEJA</strong></td>
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<td>• UBC Summer Student Research Program Grant. Project: Reconstructing Journal Club: Designing and Evaluating the Journal Club Checklist. Award amount: $3,200. Role: PI.</td>
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**DR. DOUGLAS COURTEMANCHE**

- UBC Summer Student Research Program Grant. Project: Ideal tools for patient reported outcome measures (PROMs). Award amount: $1,600. Role: PI.
- CIHR Grant. Project: Cleft-Q. Award amount: $10,000. Role: Site PI.

**DR. MORGAN EVANS**

- Best Poster Award, American Burn Association 2015. Treatment of toxic epidermal necrolysis by a multidisciplinary team: A review.
- Dr. Robert Cowan Best Resident Paper Award, UBC Division of Plastic Surgery Resident Research Day. 2015. From bench to bed: Initiating a phase I clinical drug trial in Canada.

**DRS. PERRY GDALEVITCH, SHEINA MACADAM, ADELYN HO, KRISTA GENOWAY, ESTA BOVILL, PETER LENNOX AND NANCY VAN LAAKEN**


**DR. ADELYN HO**

- 2015 CSPS GAM Microsurgery Scholarship. Award amount: $5,000.

**DR. AARON KNOX**


**DR. SHEENA SIKORA**

- 2015 Tilley Award Canadian Society of Plastic Surgeons. Award amount: $10,000.

**DR. DIANA SONG**


**DR. CINDY VERCHERE**

- CIHR Network Catalyst Grant. Project: Creation of an Advancement of Burn Care in Canada Network. Award amount: $17,000. Role: Site PI.
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Given that it’s an election year in the United States, the regular and routine amount of hot air, pomp and pageantry, posturing and pander on the stump certainly proves for dramatic headlines and sound bites. You could make an argument that the outcomes and stories noted on the preceding pages would give our division the green light for similar behavior. However, the polar opposite could not be more true. In the seven years I’ve been proud to be a member of this division, humility would be the word I would use to describe the character of our division and its membership. Bob Thompson modeled it, Mark Hill exemplifies it, Jason Gray lives it, Jim Boyle has it, and our residents and fellows have the privilege of growing up learning it.

Surgery itself can be a humbling exercise; we forget our nineteen successful operations, but rarely forget our one complication. It is been said that one the keys to an organization’s success is creating a culture of autonomous yet like minded human resource by getting the right people on the bus; I would argue that the “white beards” and “white manes” in our division have had the foresight to get people with the right character on our bus.

History is studied so that societies can learn from their errors of the past and hopefully not make the same mistakes again. Perhaps some of those running for the top job in the US need to study music history and revisit the old song Walking in your Footsteps by the Police, where Sting croons: “they say the meek shall inherit the earth”.

A special thanks to KLS Martin for sponsoring this edition and to Maureen Berard and Norine Mayede for all they do.