

# CURRICULUM VITAE

## DR ANDREW JOHN GODFREY APEL

MBBS (Qld) FRANZCO  
OPHTHALMOLOGIST

### Biographical Details:

D.O.B.:	2 October 1962
Place of Birth:	Brisbane
Citizenship:	Australian
Marital Status:	Married
Address:	87 Wickham Terrace Brisbane QLD 4000 AUSTRALIA Phone: M: 0409 471877 B: 07 3831 8606 F: 07 3831 4304

## PRESENT POSITION:

Clinical Ophthalmologist in private practice  
Area of special interest: Corneal and External Disease

Visiting Staff Consultant Ophthalmologist  
Princess Alexandra Hospital  
Brisbane

## QUALIFICATIONS:

### Cornea and External Disease Fellowship

Department of Ophthalmology  
University of Toronto  
Toronto, Canada 1992-1994

### ECFMG

Education Commission of Foreign Medical Graduates (USA Entrance Exam) 1989

### FRACO

Fellow Royal Australian College of Ophthalmologists 1993  
Part I 1988  
Part II 1991

### MBBS University of Queensland

Bachelor of Medicine; Bachelor of Surgery 1985

## EDUCATION:

### Pre-Medical

Indooroopilly State School 1968-1971  
Brisbane Boys College 1972-1979  
Prefect 1979

### Undergraduate

University of Queensland 1980-1985  
Graduated MBBS 1985  
Included clinical attachments at:  
Redcliffe Hospital in Ob/Gyn 1984 (two months)  
Rockhampton Hospital in General Surgery 1985 (one month)

University of Minnesota  
Minneapolis, USA  
Student elective in Ophthalmology  
McCannell Fellowship  
Mentor, Dr R Lindstrom 1985 (one month)

Year Representative 1981-1982

Hospitals Area Committee Representative 1983-1984

## Postgraduate

Princess Alexandra Hospital	
Intern	1986
Junior House Officer	1987
Senior House Officer	1988

## OPHTHALMOLOGY TRAINING

### Registrar

Royal Brisbane Hospital	1989, 1991
Royal Children's Hospital	1989, 1991
Princess Alexandra Hospital	1989, 1990
Repatriation General Hospital	1990

### Additional Clinical Experience

Professor Herbert Kaufman – New Orleans, USA	1985 (one week)
Dr R Lindstrom, Minneapolis, USA	1989 (one week)
Jerry Shields MD, Wills Eye Hospital, Philadelphia, USA	1989 (one week)
Royal Victorian Eye and Ear Hospital, Melbourne, Victoria	1992 (two weeks)
Locum Ophthalmologist in Queensland Public Hospital – January to June	1992
Automated Lamella Keratoplasty Workshop, Minneapolis, USA – Coordinator Dr R Lindstrom	1994 (two days)
Phillips Eye Institute, Mineapolis, USA	1995 (three days)

### Fellow

Cornea and External Diseases	
Mentor – Assistant Professor David Rootman – Department of Ophthalmology, University of Toronto, Ontario, Canada	1992-1994

## PROFESSIONAL AFFILIATIONS

Australian Medical Association	1986-present
Medical Board of Queensland, Australia	1987-present
Education Commission for Foreign Medical Graduates, USA	1989-1995
Fellow Royal Australian College of Ophthalmologists	1989-present
Association for Research in Vision and Ophthalmology (ARVO)	1992-1993
American Academy of Ophthalmology	1992-present
College of Physicians and Surgeons of Ontario, Canada	1992-1994
General Medical Council United Kingdom (Overseas Registration)	1992-present
International Society of Refractive Keratoplasty	1993-1994
International Society of Refractive Surgery	1994-1995
American Society of Cataract and Refractive Surgery	1994-present
Australasian Society of Aerospace Medicine	1996-present
Queensland Eye Hospital – Chairman	2005-2007
Independent Ophthalmic Network (ION)	2006-present

## SCHOLARSHIPS AND AWARDS

USA student elective McCannell Fellowship	
to study under Dr R Lindstrom, University of Minnesota, Minneapolis, USA	1985

Alumni Prize (Co-author with Dr J Hopkins) Best Resident presentation, Department of Ophthalmology Research Day, University of Toronto, Canada	1993
John Gaby Prize Best Fellow presentation, Department of Ophthalmology Research Day, University of Toronto, Canada	1993
Alfred E Covell Scholarship for Ophthalmic Research Department of Ophthalmology, University of Toronto, Canada	1993-1994
John Gaby Prize Best Fellow presentation, Department of Ophthalmology Research Day, University of Toronto, Canada	1994

## TEACHING

Prosector and tutor, Medical students Department of Anatomy University of Queensland	1982-1983
Examiner Medical Student Prize Examination in Ophthalmology	1990
Lecturer Medical Students Ophthalmology Training	1989-1990
Participant Lecturer in Resident and Medical Officer Training Program Princess Alexandra Hospital	1989
Surgical tutor for Ophthalmology Trainees, University of Toronto	1992-1994
Clinical teacher Ophthalmology Registrar Program Repatriation General Hospital and Greenslopes Private Hospital Brisbane	1994-2006
Clinical teacher Ophthalmology Registrar Program Royal Brisbane Hospital Herston, Brisbane	1998-2003
Clinical teacher Ophthalmology Registrar Program Princess Alexandra Hospital Woolloongabba, Brisbane	2004-present
Chairman Qualifications and Education Committee RANZCO (Qld) In charge of Registrar teaching	2016-present
The Sydney DMEK Course New Line Lecturer and Instructor Wetlab	2016-2018

## RESEARCH

### PUBLISHED ARTICLES:

#### Abstracts

**Apel A**, Woodward R

Single-injection peribulbar local anaesthesia – a study of fifty consecutive cases  
Aust N Z J Ophthalmol 1991 May; 19(2): 149-53

**Apel A**, Woodward R

Cataract surgery – anaesthesia without hyaluronidase  
Aust N Z J Ophthalmol 1991 August; 19(3): 249

**Apel A**, Oh C, Saville B, Chiu R, Cheng Y-L, Rootman D.S.

Cyclosporine delivery using a subconjunctival biodegradable polymer device  
Investigative Ophthalmology and Visual Science. 1993:  
Presented as a poster, ARVO May 1993.

Oh C, **Apel A**, Chiu R, Saville B, Cheng Y

An ocular emphasises multi-compartmental pharmacokinetic model for cyclosporine: An application in the therapy of corneal transplantation  
Investigative Ophthalmology and Visual Science. 1993: 34:1490  
Presented as a poster, ARVO May 1993.

Solomon, R, Sibbald R.G, Rootman D.S, Slomovic A, **Apel A**, Habot J.

Cicatricial pemphigoid – diagnostic and treatment recommendations.  
Presented as a poster. Dermatology 2000, Vienna, 1993

Maberley D, **Apel A**, Rootman D.S

Releasable “U” suture for trabeculectomy surgery  
Ophthalmic Surg 1994 April; 25(4): 251-5

**Apel A**, Oh C, Saville B, Clarke H, Cheng Y-L, Rootman D.S.

Optimization of local sustained release cyclosporine A to prevent corneal transplant rejection.  
Presented as a paper at ARVO Sarasota May 1994

Oh C, **Apel A.J**, Saville B.A, Cheng Y-L, Rootman D.S.

Local efficacy of cyclosporine in corneal transplant therapy  
Curr Eye Res. 1994 May; 13(5): 337-43

Clarke H, **Apel A**, Sheardown, Oh C, Saville B, Cheng Y-L, Rootman D.S.

A semisolid vehicle for epithelial growth factor delivery in corneal wound healing.  
Presented as a paper at Research Day, Department of Ophthalmology, University of Toronto, Canada, 1994

Taylor A, Buys Y, Macken P, **Apel A**, Trope G.E, Rootman D.S.

Transscleral Nd: Yag treatment for penetrating keratoplasty glaucoma.  
Presented as a paper at Research Day, Department of Ophthalmology, University of Toronto, Canada, 1994.

- Apel A**, Oh C, Clarke H, Chiu R, Saville B, Cheng Y-L, Rootman D.  
Optimization of local sustained release cyclosporine A.  
Presented as a paper at Research Day, Department of Ophthalmology, University of Toronto, Canada, 1994.
- Apel A**, Campbell I, Rootman D.S  
Infectious crystalline keratopathy following trabeculectomy and low-dose topical steroids  
Cornea 1995 May; 14(3): 321-3
- Apel A**, Oh C, Chiu R, Saville B, Cheng Y-L, Rootman D  
A subconjunctival degradable implant for cyclosporine delivery in corneal transplant therapy  
Curr Eye Res. 1995 August; 14(8): 659-67
- Wilbanks G.A, **Apel A**, Jolly S.S, Devenyi R.G, Rootman D.S  
Perfluorodecalin corneal toxicity: five case reports  
Cornea 1996 May; 15(3): 329-34
- Hopkins J.J, **Apel A**, Trope G.E, Rootman D.S  
Early intraocular pressure after phacoemulsification combined with trabeculectomy.  
Ophthalmic Surg Lasers 1998 April; 29(4): 273-9
- Hutchinson K, Dal Pra M, **Apel A**  
Immunoglobulin G crystalline keratopathy associated with monoclonal gammopathy  
Aust & NZ J Ophthalmol 1998 May; 26(2): 177-179
- Barnard Z, **Apel A**, Harkin D.G.  
Phenotypic analyses of limbal epithelial cell cultures derived from donor corneoscleral rims.  
Clinical and Experimental Ophthalmology 2001 June; 29(3): 138-142
- Verin P.H., Easty D.L., Secchi A, Ciprandi G, Partouche P, Nemeth-Wasmer G, Brancato R, Harrisberg C.J., Estivin-Ebrardt C, Coster D.J., **Apel A**, Coroneo M.T, Knorr M, Carmichael T.R, Kent-Smith B.T, Abrantes P, Leonardi A, Cerqueti P.M, Modorati G, Martinez M  
Clinical evaluation of twice-daily emedastine 0.05% eye drops (Emadine Eye Drops) versus levocabastine 0.05% eye drops in patients with allergic conjunctivitis  
Am. J Ophthalmol 2001 June; 131(6): 691-698
- Apel A**  
Dendritic ulcer leading to impaired vision in a young man  
Medicine Today 2002 October; 3(10): 68-69
- Hutchinson K, **Apel A**  
Infectious keratitis in orthokeratology  
Clinical and Experimental Ophthalmology 2002 February; 30: 49-51
- Walker N, **Apel A**  
Painful red eye associated with contact lens wear  
Medicine Today 2003 May; 4(5): 89-91
- O'Sullivan, M.V.N, Whitby M, Hirst L.W, **Apel A**, Ellis D  
Outcome of Paecilomyces Species Ophthalmic Infections Treated with Systemic Voriconazole  
43<sup>rd</sup> ICAAC Abstracts, Chicago, Illinois, 2003 September: 448

**Apel A**

A child with itchy eyes  
Mod Medicine of Sth Africa 2003 October: 42-44

Walker N, **Apel A**

Effect of hinged lamellar keratotomy on post-keratoplasty astigmatism and vision  
Clinical and Experimental Ophthalmology 2004; 32: 147-153

Walker N.J, **Apel A**

Effect of hinged lamellar keratotomy on post-keratoplasty astigmatism and vision  
Clinical & Experimental Ophthalmol. 2004 April; 32(2): 147-153

Walker N, **Apel A**

Painful red eye associated with contact lens wear  
Mod Medicine of Sth Africa 2004 June: 56-59

Harkin D.G, Barnard Z, Gillies P, Ainscough S.L, **Apel A**

Analysis of p63 and cytokeratin expression in a cultivated limbal autograft used in the treatment of limbal stem cell deficiency  
British Journal Ophthalmology 2004 September; 88(9): 1154-8

Walker N.J, Foster A, **Apel A**

Traumatic expulsive iridodialysis after small-incision sutureless cataract surgery  
Journal of Cataract Refractive Surgery 2004 October; 30: 2223-2224

Green M, **Apel A**, Stapleton F

Common causes of keratitis at Princess Alexandra Hospital 1999-2004  
Clinical & Experimental Ophthalmology. A31. 10. Vol 34, Supplement 1, November 2006

Green M, Chow A, **Apel A**

Outcomes of combined penetrating keratoplasty and cataract extraction compared to penetrating keratoplasty alone  
Clinical & Experimental Ophthalmology. May 2007, Vol. 35(4), pp. 324-329

Green M, **Apel A**, Naduvilath T, Stapleton F

Clinical outcomes of keratitis  
Clinical & Experimental Ophthalmology. July 2007 Vol. 35(5), pp. 421-426

Green M, **Apel A**, Stapleton F

Risk Factors and Causative Organisms in Microbial Keratitis  
Cornea 2008 Vol. 27(1), pp. 22-27

Green M, **Apel A**, Stapleton F

A Longitudinal study of trends in keratitis in Australia  
Cornea 2008, Vol 27(1), pp.33-39

Statham, M, **Apel A**, Stephensen

Correction of Astigmatism after penetrating keratoplasty using the Acri.Comfort toric intraocular lens  
Clinical and Experimental Optometry, January 2010, Vol. 93(1), pp.42-44

Statham M, **Apel A**, Stephensen D.

Intraocular lens outcomes: a concern: Response.  
Clinical and Experimental Ophthalmology , April 2010, Vol. 38(3), pp. 324-325

- Choong K, Walker N, **Apel A**, Whitby M  
Aciclovir – resistant herpes keratitis  
Clinical and Experimental Ophthalmology, April 2010, Vol. 38(3), pp.309-313
- Apel W, **Apel A**, Stephensen D, Versace P  
Axial myopic progression following phakic intraocular lens implantation  
Journal of Cataract and Refractive Surgery, September 2013, Vol. 39(9), pp. 1435-8
- Maclean K.D, **Apel A**, Wilson J, Werner L  
Calcification of hydrophilic acrylic intraocular lenses associated with intracameral air injection following DMEK  
Journal of Cataract & Refractive Surgery, June 2015, Vol. 41(6), pp. 1310-1314
- McLintock C.A, McKelvie J, Gatziofufas Z, Wilson J, Stephensen D.C, **Apel A**  
Outcomes of toric supplementary intraocular lenses for residual astigmatic refractive error in pseudophakic eyes  
International Ophthalmology, 29 October 2018
- Green M, **Apel A**, Carnt N, Stapleton F  
Queensland Microbial Keratitis Database 2005-2015  
British Journal of Ophthalmology, 5 January 2019
- Green M, Hughes I, Hogden J, Sara S, **Apel A**, Stapleton F,  
High Dose Steroid Treatment of Bacterial Keratitis  
Cornea 2019, Vol. 38(2), pp. 135-140
- Kieren D, **Apel A**, Donaldson M, McDonald R, Males J, Coote M, Werner, L, Chan E  
Certification of hydrophilic acrylic intraocular lenses following secondary surgical procedures in the anterior and posterior segments  
British Journal of Ophthalmology, 23 February 2019

## **SUBMITTED AND ACCEPTED PAPERS**

- Green M, **Apel A**, Stapleton F  
Trends in contact lens microbial keratitis 1999-2015; a retrospective clinical review  
Submitted to Clinical a& Experimental Ophthalmology with a letter from the Editor indicating acceptance for publication

## **POSTERS**

- Apel A**, Oh C, Saville B, Chiu R, Cheng Y-L, Rootman D.S.  
Cyclosporine delivery using a subconjunctival biodegradable polymer device  
ARVO May 1993
- Oh C, **Apel A**, Chiu R, Saville B, Cheng Y  
An ocular emphasises multi-compartmental pharmacokinetic model for cyclosporine: An application in the therapy of corneal transplantation  
ARVO May 1993

- Solomon, R, Sibbald R.G, Rootman D.S, Slomovic A, **Apel A**, Habet J.  
Cicatrical pemphigoid – diagnostic and treatment recommendations.  
1993, University of Toronto
- C, Saville B, Clarke H, Cheng Y-L, Rootman D.S.  
Optimization of local sustained release cyclosporine A to prevent corneal transplant rejection.  
ARVO, Sarasota, May 1994
- Apel A**, Walker N  
LASIK post-keratoplasty  
35<sup>th</sup> Annual Scientific Congress RANZCO, Auckland, New Zealand, November 2003
- Walker N, **Apel A**  
Effect of hinged lamellar keratotomy on post-keratoplasty astigmatism and vision  
RANZCO 35<sup>th</sup> Annual Scientific Congress, 2003 November, Auckland, New Zealand
- Walker N.J. Royal Brisbane Hospital, Foster A, Townsville Hospital, **Apel A**, Princess Alexandra Hospital  
The Case of the Missing Iris  
36<sup>th</sup> Annual Scientific Congress of RANZCO, Melbourne, November 2004
- Green M, Chow A, **Apel A**  
Keratoplasty – Vision Outcomes & Rejection in Patients with Different Primary Corneal Pathologies  
37<sup>th</sup> Annual Scientific Congress of RANZCO, Hobart, Australia, November 2005
- Green M, Chow A, **Apel A**  
Keratoplasty  
37<sup>th</sup> Annual Scientific Congress of RANZCO, Hobart, November 2005
- Green M, **Apel A**, Stapleton F  
Common causes of keratitis at Princess Alexandra Hospital 1999-2004  
38<sup>th</sup> Annual Scientific Congress of RANZCO, November 2006
- Apel A**, Chan, S  
Topical and oral voriconazole as an adjuvant in chlorhexidine and hexamidine - resistant acanthamoeba keratitis  
RANZCO Qld Branch, Gold Coast, November 2018
- Apel W, Glasson N, **Apel A**, Wilson J, Hogden K  
Can donor corneal age influence DMEK success?  
RANZCO Qld Branch, Gold Cost, November 2018

## PEER REVIEWED JOURNALS

- Apel A**, Woodward R.  
Single injection peribulbar anaesthesia – a study of fifty consecutive cases.  
Aust NZ J Ophthalmol 1991; 19: 149-153
- Maberley D, **Apel A**, Rootman D.S.  
Releasable “U” suture for trabeculectomy surgery.  
Ophthalmic Surgery. 1994; 25(4): 251-255

- Oh C, **Apel A**, Saville B.A, Cheng Y-L, Rootman D.S.  
Local efficacy of cyclosporine in corneal transplant therapy.  
Curr Eye Res. 1994; 13(5): 337-343
- Apel A**, Oh C, Chiu, R, Saville B, Cheng Y-L, Rootman D.  
A subconjunctival biodegradable implant for cyclosporine delivery in corneal transplant therapy.  
Curr Eye Res. 1995; 659-67
- Apel A**, Campbell I, Rootman D.S.  
Infectious crystalline keratopathy in a patient following glaucoma filtering surgery without adjunctive 5-fluorouracil.  
Cornea 1995 14(3): 321-3
- Apel A**, Walker, N  
Ultraviolet radiation and the eye  
Medicine Today, 2003 October 4(10): 24-32
- Walker N, **Apel A**  
Acute red eye in a diesel fitter  
Medicine Today, March 2004 5(3): 63-65
- Green MD, **Apel A**, Naduvilath T, Stapleton, FJ  
Clinical outcomes of keratitis  
Clinical & Experimental Ophthalmology 2007, 35: 421-426
- Satham M, **Apel A**, Stephensen D  
Comparison of the AcrySoft SA60 spherical intraocular lens and the AcrySof Toris SN60T3 intraocular lens outcomes in patients with low amounts of corneal astigmatism  
Clinical & Experimental Ophthalmology. 2009; 37:775-779.
- Choong K, Walker N, **Apel A**, Whitby M.  
Aciclovir-resistant herpes keratitis  
Clinical & Experimental Ophthalmology 2010, 38: 309-313
- Satham M, **Apel A**, Stephensen D.  
Correction of astigmatism after penetrating keratoplasty using the Acri.Comfort toric intraocular lens  
Clinical & Experimental Ophthalmology. 2010; 93: 1:42-44

## **JOURNAL PEER REVIEWER**

Clinical & Experimental Ophthalmology

2014-2015

## PRESENTATIONS

### **Apel A**

5FU in Ophthalmology,  
Australian Ophthalmic Nurses Association, Brisbane, 1990

### **Apel A, Oh C, Saville B, Cheng Y-L, Rootman D.S.**

Subconjunctival sustained release of cyclosporine A in the prevention of corneal transplant rejection.  
Clinical Research Society of Toronto, Toronto, Canada 1993  
and at Research Day, Department of Ophthalmology, University of Toronto, Canada, 1993 (John Gaby Prize Winner)  
and at Sherbrooke Symposium, Sherbrooke, Quebec, Canada, 1993

### Hopkins J, **Apel A**, Trope G, Rootman D.

Immediate post-op pressure rise in glaucoma/cataract procedures  
Research Day, Department of Ophthalmology, University of Toronto, 1993 (Alumni Prize Winner)

### **Apel A, Ho Yuen V, Hopkins J, Rootman D, Trope G.**

Combined cataract and glaucoma surgery: Phacoemulsification vs standard extracapsular technique.  
Presented at the Canadian Ophthalmic Society Annual meeting.  
Montreal, Canada, 1993.

### **Apel A, Heathcote G, Jay V, Heon E, Rootman D.**

Posterior polymorphous dystrophy:- clinical findings and a family study.  
Presented at the External Diseases meeting of the Canadian Ophthalmic Society, Montreal, Canada, 1993.

### Apel J, **Apel A.**

Sutured in posterior chamber lenses.  
Presented at the Royal Australian College of Ophthalmologists  
Queensland Conference, Cairns, Australia, 1992

### **Apel A, Apel J.**

Ab externo transcerally sutured posterior chamber lenses in surgical correction of aphakia.  
Presented at the First international Symposium of Ophthalmology, Bordeaux, France, 1993

### **Apel A, Oh C, Saville B, Clarke H, Cheng Y-L, Rootman D.S.**

Optimization of local sustained release cyclosporin A to prevent corneal transplant rejection.  
Paper presented ARVO Sarasota May 1994.

### **Apel A**

Corneal Disorders in Children  
Presented at the Queensland branch of the Royal Australian College of Ophthalmologists winter meeting, August 1995.

### **Apel A**

What is Refractive Surgery?  
Presented at the 6<sup>th</sup> Medicine on the Mountain Meeting, September 1995.

**Apel A**

1990-present – Numerous presentations at Clinical Meetings

**Apel A**

Outcomes of combined penetrating keratoplasty and cataract extraction compared to penetrating keratoplasty alone  
 Visual outcomes and rejection rates of penetrating keratoplasty in patients with different primary corneal pathologies  
 2007 – Cornea and Eye bank Meeting, Auckland

**Apel A**

Ocular Surface Disease  
 19<sup>th</sup> April 2009

**Apel A**

Acri. Comfort Toric Monofocal  
 12<sup>th</sup> May 2009 – Carl Zeiss Event – Hamilton, QLD

**Apel A, Holland J**

Dry Eye Management Options and Keratoconus update  
 2010 – Luxottica Institute of Learning

**CONFERENCES ATTENDED**

Contact Lens Association of Ophthalmologists (CLAO) San Diego, USA	1986
Trainee Associate Members Conference R.A.C.O. – Clinicopathology (Guest Lecturer – Professor Fred Jakobiec) Sydney, Australia	1989
Vitreo-Retinal Conference (Guest Lecturers – Ron Michels and Charles Garcia MD) Brisbane, Australia	1989
American Academy of Ophthalmology/ASCRS Conferences 1989-2008	
Royal Australian College Ophthalmologists (R.A.C.O.) Conference Brisbane, Australia	1989
Trainee Associate Members Conference R.A.C.O. – Neuro-Ophthalmology (Guest Lecturer – Dr John Elston) Sydney, Australia	1990
International Strabismological Association Sixth Congress Gold Coast, Australia	1990
Neuro-Ophthalmology Society of Australia Sixth Scientific Meeting Sydney, Australia	1990

Ocular Infections Workshop Professor Douglas Coster Flinders Medical Centre Adelaide, Australia	1991
Contact Lens and Refractive Surgery Conference (Guest Lecturer – Professor Douglas Coster) Sydney, Australia	1991
Trainee Associate Members Conference R.A.C.O. – Paediatrics (Guest Lecturer – Professor Hoyt) Sydney, Australia	1992
R.A.C.O. Victorian Branch Meeting (Guest Lecturer – Dr Robert Osher) Lorne, Victoria, Australia	1992
Canadian Ophthalmic Society Annual Conference (Guest Lecturers – Prof. George Waring and Prof. Peter Laibson) Vancouver, Canada	1992
Sally Letson Conference Glaucoma (Guest Lecturers – Prof. S Drance, D. Andersen and B. Shields) Ottawa, Canada	1992
ARVO Association for Research in Vision and Ophthalmology Sarasota, USA	1992
1 <sup>st</sup> International Symposium of ophthalmology Bordeaux, France	1993
Sally Letson Conference Oculoplastics and Trauma (Guest Lecturer – Professor R. Anderson) Ottawa, Canada	1993
Sherbrooke Symposium (Guest Lecturer – Dr Kupfer) Sherbrooke, Canada	1993
American Society of Cataract and Refractive Surgery Boston, USA	1994
International Society of Refractive Keratoplasty Toronto, Canada	1994
International Congress of Ophthalmology Toronto, Canada	1994

International Society of Refractive Surgery Minneapolis, USA	1995
AEGAN Cornea Meetings	1995-2006
AUSCRS	1995-present
Royal Australian College of Ophthalmologists' Annual Scientific Meeting	1995-present
Corneal & Eye Bank Meetings	1995-present
Hawaiian Eye Meetings	2007
ESCRS – Berlin	2008
ESCRS – Copenhagen	2016
SONS (Society of Neuromuscular Sciences) – Niseko	2017-2018
ASCRS – Washington	2018

## **FUTURE PROSPECTS:**

To develop a career encompassing general ophthalmology with special interest in adult and paediatric contact lenses and refractive, corneal and anterior segment surgery. This being facilitated by sub-specialist training in this area.

### **Sub-Specialist Fellowship Training in Corneal Surgery and External Disease**

#### **Introduction**

My training appointment was for the period July 1992 – July 1994. The year July 1, 1992 to July 1, 1993 was spent at the largest Ophthalmology teaching hospital in Canada, the Toronto Hospital. Toronto has a population of approximately 3 million and is the capital of the province of Ontario.

The Toronto hospital has two divisions; the Toronto General hospital and the Toronto Western Hospital. The Department of Ophthalmology at the Toronto Hospital consists of two full-time subspecialist staff in Glaucoma, two in Cornea and External Disease and two in Retina, as well as part-time staff. The training program has 24 Residents (Registrars) and 15 Fellows.

The majority of each week was spent at the Toronto Hospital, however in addition I attended one outpatients clinic each fortnight and three operating sessions each month at the Hospital for Sick Children. The clinic was a tertiary referral clinic for paediatric anterior segment disease.

My supervisor was Dr David Rootman, Assistant professor of Ophthalmology and my training was as a Fellow in Cornea and External Diseases.

During the year I worked in clinics, as well as operating on both adults and children. I performed clinical and basic science research projects; the results of which have been presented at conferences and included winning the John Gaby prize and was co-author for a paper that won the Alumni prize for research in ophthalmology at the University of Toronto, Department of Ophthalmology Research Day. These papers have also been submitted for publication in peer review journals. I was also involved in teaching ophthalmology trainees (residents) and other staff members in the Department the skills of corneal surgery and phacoemulsification.

#### **Clinical Training**

I was exposed to a wide variety of corneal pathologies that required medical management. These included corneal ulcers, herpes, blepharitis, rosacea, recurrent erosions from dystrophies and trauma, old trachoma, non-healing defects, transplant rejection and keratoconus requiring contact lens fitting.

As Canada is multicultural, there are many patients who are from third world countries and consequently have third world pathologies such as interstitial keratitis, trachoma and advanced pterygia. These were frequently seen.

I also trained with a contact lens practitioner, who fitted numerous keratoconic and paediatric patients.

#### **Surgical Training**

The practice was a tertiary referral practice for corneal surgery, complicated cataract surgery and combined cataract and glaucoma surgery.

Corneal transplantation was performed most commonly for pseudophakic bulbous keratopathy with IOL exchange but also for Fuch's dystrophy, keratoconus, corneal scar, aphakic edema, and corneal melts.

The transplants were combined with vitrectomy, cataract extraction, anterior chamber or suturing in posterior chamber lenses.

Other corneal procedures included keratoprosthesis, keratoepithelioplasty, pterygium excision with lamellar keratectomy and conjunctival graft. Scar removal, using a new instrument, the automated microkeratome and donor lamellar grafts, were also performed. I made the epikeratophakia lenticles on a cryo lathe and performed the surgery on young aphakic adults and children. Wedge resections and relaxing incisions were performed on corneal transplant patients with residual astigmatism.

Cataract and combined cataract glaucoma surgery was performed using phacoemulsification and a continuous "u" shaped releasable suture on the scleral trapdoor. This technique was produced as an educational video and published in Ophthalmic Surgery.

Surgery at the Hospital for Sick Children included congenital cataracts, secondary posterior chamber lens insertion, corneal transplants and excision of limbal dermoids and lamellar corneal transplants.

### **Basic Science Research**

In conjunction with the Department of Chemical Engineering at University of Toronto I developed a biodegradable delivery device for the local administration of cyclosporine A to prevent corneal transplant rejection in high risk cases. This was to avoid the systemic side effects of cyclosporine A.

A rabbit model was used to mimic high risk corneal transplants. The device was made of polylactic glycolic acid and was implanted in the subconjunctival space and degraded over time with release of the cyclosporine A. To date the experiments show the procedure is effective in prolonging transplant survival and the results were presented at the Association for Research and Vision in Ophthalmology. In the second year of the fellowship I optimized the quantity of cyclosporine A required for long-term survival of these transplants.

### **Clinical Research**

I performed retrospective and prospective studies, as well as writing up case reports.

The major clinical research I undertook was to compare the outcomes of combined cataract and glaucoma surgery using phacoemulsification and extracapsular techniques. Doing this form of medical research has taught me the benefits of precise record keeping and observation, as well as an understanding of the power and shortcomings of statistics.

The results of this study were presented at the annual meeting of the Canadian Ophthalmologic Society 1993. Other work involved researching a family with Posterior Polymorphous Dystrophy with the unusual presentation of congenital corneal edema, reporting a case of infectious crystalline keratopathy and two cases of perfluorodecalin corneal toxicity.

### **Teaching**

I was involved in teaching residents on an informal basis in the clinics and ward rounds but also formally using didactic lectures and once a month in a wet lab situation. I taught the first year trainees basic suturing techniques, and I also taught the more advanced trainees extracapsular and phacoemulsification techniques using donor eye bank eyes.

I was also involved in teaching part-time staff phacoemulsification by demonstrating and assisting them at surgery.

### **Fellowship July 1993-July 1994**

I was awarded the Covell Scholarship in ophthalmology research from the University of Toronto and this was used to fund my second year of the Fellowship, July 1993-July 1994. This is a continuation of the previous year's work with more emphasis on contact lenses, corneal topography, paediatric anterior segment surgery and optimisation of the devices for cyclosporine delivery.

Upon completion of the fellowship I returned to Brisbane to commence practice in ophthalmology with a special interest in adult and paediatric contact lenses, corneal and anterior segment surgery and external disease.