

PROFILE

Professor Brien Holden OAM
Scientia Professor

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The University of New South Wales has recently established the prestigious rank of Scientia Professor to recognise staff members who have made outstanding contributions to scholarship and to the university. Professor Brien Holden is one of 12 professors given this special accolade. He and the profession of optometry have every right to be proud of this acknowledgement of his achievements. It is an important honour but it is just one of many special tributes that Brien has received during his illustrious career.

He was awarded the Medal of the Order of Australia in 1997 for his contributions to contact lens technology and clinical practice. This year, he will receive a Special Recognition Award from the Association for Research in Vision and Ophthalmology (ARVO) for his outstanding contributions to vision science. He has been admitted to honorary Doctorates from the City University in London, the State University of New York and the Pennsylvania College of Optometry. The American Academy of Optometry has conferred on him the Max Shapero Memorial Lecture Award (1977), the Glenn A Fry Lecture Award (1988) and the Eminent Service Award (1998). Table 1 and Table 2 show his major appointments and memberships. However, such details are only part of the story of a truly remarkable career.



Professor Brien Holden OAM
Scientia Professor at the
University of New South Wales

THE EARLY YEARS

Brien's odyssey started when he graduated in Optometry at The University of Melbourne in 1964. There was something special about an optometry education at that university at the time. Out of 20 graduates over a three-year period, eight became professors of optometry and another two have PhD degrees.

Brien's time at secondary school had not been particularly distinguished academi-

cally. He matriculated in 1959 from Christian Brothers College, East St Kilda, at his second attempt; his desire to play First Grade football was rumoured to be one of the major benefits sought from a second attempt at his final year. He was interested in studying pharmacy but Des Millman, one of the directors of the group optometric practice of Coles and Garrard in Melbourne, talked him into doing optometry. He was told that it was 'a nice, easy nine to five profession'. When he graduated, Brien found he enjoyed the people side of optometric practice and given his undistinguished high school performance and a comprehensive failure of second year optometry (failing physiological optics and physiology and biochemistry), it is not surprising that he did not aspire to an academic career during his early years as an optometrist.

However, like many Aussies of that era, he was keen to embark on a trip overseas. After a year in practice in Melbourne, working for a very tolerant optometrist Harry Held, he married Yvonne Flahavin and they left for England in 1965. They travelled with half of Brien's football team (one of them as a stow-away) on the good ship *Ellinis*. Despite being a poor sailor, the trip was a revelation for the short-back-and-sides, football-obsessed Melbournite. The ship called in at Colombo and the desperate circumstances of the people in that country struck a special chord that was later to stimulate a life-long passion with the politics of poverty and a love affair with the Indian Sub-Continent and its needs.

Brien went to London in part to study for his Diploma of Contact Lens Practice, in his mind the field in which optometry was the real expert. His mate Ian Bailey,¹ who was also in London at the time, suggested that Brien should take up optometric research as it was 'bloody good fun'. Though sceptical, Brien became intrigued with the conflicting opinions on whether the cornea could (Jessen) or could not (Rengstorff) be permanently reshaped. He embarked on a fairly tumultuous career as a postgraduate student, becoming a prominent student activist. He organised student strikes as well as anti-Vietnam war protests at the US Embassy in London. A pivotal 20,000-mile trip around the USA with his wife and Leon Garner² in 1967, during the height of the ghetto uprisings and anti-war protests, had a profound impact on his sense of social justice.

With great support from his supervisor, the late Charles Padgham, he completed his PhD thesis at The City University after bending a few elbows and corneas (as well as the minds) of his PMMA orthokeratology research subjects. Three of his 10 research subjects drawn from among the undergraduate students in optometry at the City University (Dan O'Leary, Judy Morris and Jan Bergmanson) never fully recovered from the trauma of participating in Brien's research and ended up academics.³

BACK TO AUSTRALIA

When Brien finished his PhD in late 1970, two jobs were being offered in optometry at Australian universities, one in Melbourne and the other in Sydney. He was offered the position as Lecturer at the School of Optometry at The University of New South Wales. This opportunity enabled Brien, Yvonne and his two young London-born children, Anthony and Karen, to return to Australia at the government's expense. Second son Daniel was born in Sydney in 1976. In retrospect, Brien said that they were very lucky to end up in Sydney, as it gave them a chance to 'start a completely new adventure in this beautiful, cosmopolitan and egalitarian city'.

Position	Organisation
Invited Chair	World Health Organisation's Refractive Error Working Group (2001-)
Chair	International Centre for Eyecare Education (1998-)
President	International Society for Contact Lens Research (1982-1984)
Vice Chairman	International Association of Contact Lens Educators (1979-1991)
President	International Association of Contact Lens Educators (1991-2000)
Founder and President	Optometric Vision Research Foundation (1973-1982)
Member of Executive and Assistant Treasurer	Optometric Vision Research Foundation (1973-)
Founder Member of the Executive Committee	National Vision Research Foundation (1983)
Councillor	Australian Optometrical Association (NSW Division) (1973-1977, 1989-1992)
Councillor	The Contact Lens Society of Australia (1972-1982)
Honorary Life Member	New Zealand Contact Lens Society
Fellow	Body of Fellows of the Contact Lens Society of Australia (1997)

Table 2. Brien Holden: appointments and memberships

Year	Institution
1978-1981	Moorfields Eye Hospital, London, United Kingdom
1978	School of Optometry, University of California, Berkeley, United States
1978	School of Optometry, Ohio State University, Columbus, United States
1978, 1981, 1984	Department of Ophthalmology, University of Helsinki, Finland
1985, 1987	Department of Ophthalmology, University of Minnesota, United States
1992	Adjunct Professor, University of Waterloo, Waterloo, Ontario
1993-	Senior Advisor, Academic Committee, National Center of Optometry, Wenzhou Medical College, China
1993-	Guest Professor, Department of Optometry and Ophthalmology, Wenzhou Medical College, China

Table 2. Brien Holden: visiting appointments

Brien was the first full-time lecturer at UNSW with an optometry degree from another university. His 'new broom' influence was profound but his academic colleagues Dr Jack Alexander, Dr George Amigo, Dr Max Lang, Mr Graham Dick and his Head, Professor Josef Lederer, were very tolerant. Brien's influence was

not only in contact lens studies but also in teaching diagnostic drugs, where his UK qualifications enabled him to be the first optometry teacher of the subject in Australia.

Soft contact lenses were a new technology at the time and they presented countless opportunities for investigation. Brien

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- Holden BA, Reddy MK, Sankaridurg PR, Buddi R, Sharma S, Willcox MDP, Sweeney DF, Rao GN. Contact lens induced peripheral ulcers with extended wear of hydrogel lenses: histopathological observations on the nature and type of corneal infiltrate. *Cornea* 1999; 18: 538-543.

Table 3. Brien Holden: 10 most significant papers

threw himself into several studies that were to form the basis for increasing recognition by the profession and the contact lens industry that Brien and the UNSW could be depended on for high quality clinically relevant research. His first trips overseas in the mid-1970s convinced him that the work we did in Australia was as good as the research anywhere. Graduate students at that time shared his enthusiasm and people like Lewis Williams⁴ and Steve Zantos⁵ made incredible contributions, not just to the research but also to the slide-colouring, bottle-washing and undergraduate student supervising duties that PhD students of the time were press-ganged to do.

It was out of the research with Steve and later Lewis that the significance of the amazing 'endothelial bleb' phenomenon (see references 1 and 6, Table 3) was discovered. Previously, it was thought that the

endothelium functioned independently of atmospheric and epithelial events. The first presentations of the 'bleb' phenomenon in Japan (Menicon International Contact Lens Symposium, Nagoya, 1976) and the United States (National Research Symposium in Rochester in 1976) caused a sensation by challenging the existing understanding of corneal physiology. At the instigation of such established cornea researchers as Maurice, Mandell and Ruben, this area of study helped forge new 'corneal physiology careers' for these UNSW researchers. It also created life-long partnerships with Nag Rao⁶ and Antti Vannas,⁷ both experimental ophthalmologists at the time.

Brien's influence on industry was growing and I remember a visit we made to a contact lens manufacturer in California in 1975. The company president was embar-

assed because this antipodean understood more about measuring his company's soft contact lenses than did the company's laboratory. Our visit that year to the Menicon Laboratory in Japan coincided with the visit of two representatives from a large Canadian contact lens laboratory. Such was Brien's growing reputation that the Canadians had to accept their guided tour and hospitality from lower management, while the president and his top people spent the day listening intently to what Brien had to say.

THE RESEARCH CENTRES

Brien established the Cornea and Contact Lens Research Unit (CCLRU) at UNSW in 1976 and this organisational structure became the basis for the phenomenal growth in research activity within the School of Optometry in subsequent years. Fifteen years later, the Australian Government recognised just 15 centres of research excellence with special funding. These grants were given in competition with other major research groups in all fields throughout Australia. As a result, the Cooperative Centre for Eye Research and Technology (CRCERT) was established in 1990, funded by a \$14.3 million grant for its first seven years, with Brien as its Foundation Director.

As an indication of the scope of all these research activities, Brien and the CCLRU and CRCERT scientists have attracted more than AU\$70 million in research funding since 1973, including AU\$35 million in Australian Government grants. Brien has always readily acknowledged the many people who have helped achieve this level of recognition and success, including staff members of CCLRU and CRCERT, Debbie Sweeney, Arthur Ho, Arthur Back, Sylvie Sulaiman, Donna La Hood, Tim Grant, Maki Shiobara, friend and colleague Brian Layland⁸ and more recently, Mark Willcox, Paul Erickson, Fiona Stapleton and Padmaja Sankaridurg. Many others have also made significant contributions.

The need for high quality product development and assessment has provided Brien with many opportunities for collabo-

rative research with industry partners. He often cites Dr Adrian Hunter, (formerly Senior Vice-president of Research and Marketing for Ciba Vision), Ron Zarella (formerly Bausch and Lomb and now President of General Motors North America) and Patrick Cherrier (President of Essilor Asia) as the industry's visionaries, along with friends Dr George Mertz (former Senior Research Fellow at the CCLRU and now Head of Academic Affairs, Vistakon, Jacksonville Florida), Dr Rick Franz (Vice-President of Professional Services at Ocular Sciences Incorporated) and Dr Susan Brown-Skrobot (Director of Biological Sciences Research at Vistakon, Jacksonville, Florida) as the outstanding industry partners in much of the work. Again many others played significant roles.

He has enjoyed many opportunities to work with fellow researchers from other universities such as Ken Polse (Deputy Dean, School of Optometry, University of California, Berkeley), George Mertz, Des Fonn (Professor of Optometry, University of Waterloo, Canada), Monty Ruben (Former Head of Department of Contact Lenses and Prosthetics at Moorfields Eye Hospital in London) and Dick Hill (Former Dean, School of Optometry, Ohio State University), all of whom have fuelled his imagination. His interests have been extended beyond contact lenses by such people as Visiting Professors Antti Vannas, Nag Rao, Robert Augusteyn (Director, National Vision Research Institute, The University of Melbourne), Jean Marie Parel (Bascolm Palmer Eye Institute, Florida) and Minas Coroneo (Professor of Ophthalmology, UNSW). As a result, CRCERT currently has major research projects aiming at creating artificial corneal onlays to replace more invasive refractive surgery and visco-elastic polymer replacements for the crystalline lens to restore accommodation.

At a recent reckoning, Brien is the senior author or co-author of 277 publications. The most significant of these is difficult to determine, as they represent an enormous record of important contributions to optometry and vision science, but the 'top 10' have been selected and are shown in Table 3.

THE SOCIAL REFORMER

When Brien returned from England in 1971, he was a strong advocate for socialist principles (a bleeding Commie, according to some of his pommy friends). This zeal is apparent in the causes Brien has initiated or become involved with over the past 30 years. He was the founding director of the Optometric Vision Research Foundation (OVRF), established to raise funds for optometric research and of the International Association for Contact Lens Educators (IACLE); he was recently appointed the founding chair of the International Centre for Eyecare Education (ICEE).

Through the incredible dedication of people such as Debbie Sweeney, Des Fonn, Sylvie Sulaiman and Yvette Waddell, IACLE has made an outstanding contribution to the standard of contact lens teaching throughout the world. Perhaps even more importantly, IACLE has created a model for the co-operative industry development of generic eye care education materials. Another outstanding educational feat has been the contact lens and spectacle prescribing instruction given to more than 20,000 practitioners, throughout a dozen countries, by the team of Arthur Back, Donna La Hood and Sylvie Sulaiman through the Asian Contact Lens Education Program and the Presbyopia Education Program.

Brien has maintained the momentum for these activities for more than 25 years, with an average of about eight overseas trips each year. He operates in a very competitive area with other contact lens research centres around the world that are equally keen to take responsibility for the research funds and other opportunities that arise from collaboration with the manufacturing industry.

When in Sydney between overseas trips, he is always challenged by the need to catch up on matters that accumulate while he is away and by the need to prepare for the next conference, trip or opportunity for change. He might have written the book about one minute management because he is forced to use this method continually in his 'last minute' style.

To his credit, he has made time available for many other activities that are peripheral to his primary interests. He has served as chair of the Dispenser's Registration Board of New South Wales and, according to the dispensers on the board, he handled this role in a surprisingly unbiased manner. He was elected to the Governing Council of the University of NSW from 1995 to 1997. With Brian Layland, David Pye, Debbie Sweeney and Frank Back, he established VisionCare NSW for those in need of subsidised eye care. VisionCare NSW has supplied more than 500,000 pairs of spectacles to financially disadvantaged people in NSW. This achievement would not have been possible without the co-operation of the 650 optometrists and optical dispensers who deliver the service and the excellent management provided by Barry McNamara's team.

Along with OVRF staffers of the time, Sandy Hunt-Sharman and Sue Brooks, he was the driving force behind the \$500,000 raised by the OVRF in support of a new building for the School of Optometry at the UNSW. This fund proved to be the key factor in securing the commitment of the university for the building. Brien had the vision to realise the many advantages of bringing all the research and teaching facilities of the CCLRU and the CRCERT to the UNSW's Kensington campus, where they could be physically integrated with the School of Optometry. In the last three years, Brien and his group have raised an incredible \$4 million towards their share of the new Rupert Myers Building.

THE INTERNATIONAL CENTRE FOR EYECARE EDUCATION

Brien, the CCLRU-CRCERT people, Nag Rao in India and Des Fonn in Canada share a passion for contributing to the visual welfare of those in need. These combined energies led to the establishment of the International Centre for Eyecare Education (ICEE) in 1999. ICEE's goal is to eliminate avoidable blindness and impaired vision for those in need. This endeavour can be seen as Brien's response to his deeply-held feelings about the need to help impoverished people, feelings that

were first aroused when he stopped in Colombo on his way to England in 1965. ICEE is a non-profit, non-government collaborative organisation, which in only two years has become a member of the Global Task Force of the International Agency for Prevention of Blindness and the World Health Organisation partnership committee. Brien has been invited by these global organisations to chair the Refractive Error Working Group for WHO, where his major responsibility, through ICEE, is to develop the global strategy for the elimination of refractive error as a cause of blindness and serious visual impairment.

Brien is extremely proud of the contributions being made by the ICEE team and especially his long-time friend Brian Layland⁸ to the eye care of indigenous and disadvantaged people in Australia and overseas. Brien marvels at the energy and achievements of 'old Brian' in establishing a wonderful relationship with the Aboriginal Community Controlled Health Organisations. The outcome so far has been the establishment and government funding of nine ICEE eye clinics within Aboriginal Medical Services (AMS) and the provision of eye care services at 28 other AMS locations in NSW alone. In the Northern Territory and in East Timor, the work of colleagues Fiona Dimond, Jacqui Ramke and Margie O'Neill and ophthalmologist Nitin Verma has been outstanding. Kavin Naidoo, ICEE's Director in Africa, has established, with Sylvie Sulaiman's help, a 'Train the Trainer' program that eventually will build the skilled human resources necessary to provide eye care services for many hundreds of thousands of Africans in need. Especially satisfying is ICEE's emphasis on building local capacity by developing education programs and self-sustainable delivery systems in developing countries. These approaches are the key to making a lasting difference for regions in critical need of eye care.

WORK AND PLAY

Brien enjoys great loyalty from people. The example he sets for hard work and dedication to wide-ranging projects inspires high achievement in the people around him. The various organisations they have

helped Brien to initiate, (CCLRU, CRCERT, VisionCare NSW, IACLE, ISCLR, ICEE, OVRF and the Institute for Eye Research) now employ 140 people in Australia and 35 overseas. That so many people are active in research, education and public health optometry is nothing short of amazing and a tribute to Brien and the people who can put up with his sometimes 'bulldozing' style. Brien is generous in acknowledging the support he receives although, of necessity, the opportunities to do so are often brief. A conversation with Brien at any time may be less than satisfactory, if he has just spent a difficult half-hour on the telephone discussing millions of dollars with a potential supporter of a future project.

Fortunately, Brien is a gregarious character who likes to relax with the same intensity with which he works. His friends are in awe of his capacity to socialise and work day after day but it all catches up with him sometimes. He has been known to take the telephone off the hook in his hotel room prior to his participation in a conference. Sometimes he will remain in his room for a few days to take respite from travel and his self-imposed regimen of hard work and networking. When this happens, the host conference committee and even co-workers will make concerned enquiries about him. He emerges from these periods of seclusion invigorated and with lectures prepared for the next opportunity to convey new information and promote his various causes.

There are two highly anticipated special events on his conference calendar. The first is the Annual Ohio Research Symposium, where he and a few long-time mates hibernate at the Ricky Franz Lake in the Appalachian foothills in Southern Ohio. The agenda is apparently the meaning of life. The second is the Biennial golf challenge organised by the Australian Scottish League of International Corneal Assessors (ASLICAs). Brien's modest golf handicap of 27 comes in handy in this competition.

He has been the principal guest lecturer at many conferences and has frequently been asked to give keynote presentations, medal addresses and memorial lectures.

His capacity to provide a global view of a wide range of topics is second to none. In 1972, Dick Hill, a prominent cornea researcher, came to the Australian Contact Lens Society Conference and introduced the potential for succinct 'word' slides to improve the delivery of information during a lecture. Brien developed this method with the introduction of colour (miles of coloured tape was used) and dual slide projection. The right slides showed graphs and pictures, while the left showed the complementary word component of the lecture. I think there was at least one occasion when Brien progressed to three projectors for the same lecture—such developments support his reputation as one of the really great and adventurous communicators.

Brien is very Australian and loves to promote his country. Many years ago at the American Academy of Optometry meeting, he started a tradition of an Australian party by inviting people to his room for an informal drink and discussions. Foster's beer was always on hand and Australia's latest sporting success would be a central theme. The 'Australian Room' now takes place in the largest ballroom at the Academy Meeting's Hotel and has grown to the point where the official Academy dinner was moved to an alternative night, apparently to avoid conflict with the Australia party. A 'DJ' (this year a live band) is hired to provide dance music, video tapes run continuously promoting Australia, Brien's co-workers and their activities and Foster's is provided from a professional bar. Foster's America considers the occasion to be one of their better promotions with more than 1,000 people attending during the night.

With so much time out of the country, Brien has often been labelled a visiting professor in his own school—the one who gives occasional guest lectures. Despite his commitment to many professional causes, Brien has still managed to maintain strong family involvement often centred around his children's activities that include soccer, cricket, tennis and skiing. In recent years Karen's children, his much loved grandchildren, Madison and Zachary, have enriched his life enor-

mously and put him in touch with the responsibilities of being a 'Pa' and the delights of seeing them grow up.

Brien has always enjoyed a variety of sports but his first love is Aussie Rules. He was Club Best and Fairest twice with Christian Brothers College St Kilda Old Boys. He even joined with other London expats to start an Australian Rules competition in the UK, the highlight being the Crystal Palace match between Australia and the Londoners where his rover was Bobby Skilton and centreman Ron Barrassi.

Sydney was not so enthusiastic about Australian Rules football until the Swans were established in the 1970s, so Brien and Yvonne focused their interest on other sports. They established the Kensington Sports Club, later to become the Astrolabe Sports Club, fielding 15 soccer and 12 junior cricket teams each year. Brien retains his passion for sport of all kinds and after 45 years of playing golf, he is still trying to get below his long-time handicap of 27. He would really like to beat his sons, Anthony or Daniel, or any passing Scot or American. He must have won at least one golf game, as there is a framed US\$20 note in his office signed by a previous President of Johnson and Johnson's contact lens division.

He is not finished yet. He is now 'hell-bent' on two major goals. First, to see all the alphabet soup of organisations he and his friends have initiated become financially secure and integrated into a single body. This umbrella organisation will be called One Vision, for which the mission statement is 'Vision excellence for all people'. His second goal, one that strikes fear into the hearts of his work colleagues, is to not retire until he is 78, which will be in 2020. This recently espoused and frightening prospect is based on his desire to see through the elimination of avoidable blindness and impaired vision through the WHO-IAPB project Vision 2020: the Right to Sight, which is due to be completed in 2020. With his customary resilience, he is odds on to make it.

REFERENCES

1. Ian Bailey was another Melbourne optometrist, graduating in the class of 1962. He is now Professor of Optometry in the University of California, Berkeley, and is an international leader in low vision.
2. Leon Garner graduated in optometry from The University of Melbourne in the year after Brien Holden. He was a fellow PhD student at the City University with Brien Holden and is now Professor of Optometry at the University of Auckland.
3. Dan O'Leary is Professor of Optometry and Head of School at the East Anglia Polytechnic University, having previously been Head of the School of Optometry at The University of New South Wales. Judy Morris is Reader at the City University London and President of IACLE Europe. Jan Bergmanson is Professor of Optometry at Houston University and a leading ocular anatomist in optometry.
4. Dr Lewis Williams, sometime Technical Director for CIBA Vision Australia, is now a Senior Academic Associate with the International Association of Contact Lens Educators in Sydney, with responsibility for its teaching program development.
5. Following a distinguished career as Director of Research at Bausch and Lomb, Rochester NY, Dr Steve Zantos returned to Australia and is now a principal in a laser surgery co-management centre in Sydney.
6. Dr Gullupalli Nagesh Rao is one of the world's leading humanitarians and public health ophthalmologists. He is Secretary-General of the International Association for the Prevention of Blindness and Director of the outstanding LV Prasad Eye Institute in Hyderabad in India.
7. Dr Antti Vannas is a renowned Finnish corneal researcher and surgeon. He followed his distinguished research career at Helsinki University with appointment as Chief of Ophthalmology for the Finnish Armed Forces. He has been Visiting Professor at UNSW for over 15 years, heading surgical projects at CRCERT and CCLRU.
8. Brian Layland is a practising optometrist, a Visiting Professor at UNSW, a former National President of Optometrists Association Australia and is currently Head of ICEE's Aboriginal eye health programs in NSW. He was one of the founders of the OVRF more than 30 years ago and has been a driving force behind the establishment and operation of the managing boards of CRCERT, IER, ICEE and VisionCare NSW.

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