CLINICAL AND EXPERIMENTAL
OPTOMETRY

PROFILE

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Late in 1961, Barry Collin walked up the stairs to the tiny staff room in the Victorian College of Optometry to have a cup of coffee with me. He told me that he was thinking of leaving his job as optometrist in his father's practice and was looking for a new job. His work as an optometrist was no longer giving him much satisfaction. The practice in which he worked was not very busy and he was not finding the patients he saw challenging enough. The practice of optometry was not as interesting in the 1950s as it is today—Schiötz tonometry had just arrived, slit lamps were uncommon, the use of mydriasis and cycloplegia was prohibited by law and contact lenses were in their infancy. Detection of signs of eye disease lead to referral rather than diagnosis and evaluation, and treatment was not contemplated.

Because the practice in which he worked was not so busy, Barry filled in his spare time preparing for his classes as a part-time demonstrator in the Physics Department at The University of Melbourne and writing the lectures in ocular pathology he gave as a part-time lecturer in the Victorian College of Optometry. He found this academic work so engaging that he had come to regard his patients as an interruption to the interesting work. He felt he was ready for a change in career after seven years in private practice, especially as his father was reluctant to admit him to partnership because it would favour him over his three siblings who were not optometrists.

Barry had completed the four-year optometry course at the Victorian College of Optometry in 1954 with some distinction. The college was then independent of The University of Melbourne although many of the subjects of the optometry course were also subjects of the Bachelor of Science course in the university. Some diplomates of the college continued their studies for another year to complete a BSc degree. Barry Collin was one of them. He completed his BSc in 1956 with a major in pathology and sub-majors in zoology and physics.

His BSc degree in Pathology was one of the reasons for his appointment in 1957 as a part-time lecturer in ocular pathology in the Victorian College of Optometry and his sub-major in physics qualified him for his part-time demonstrator position in the Physics Department in the university.

Barry Collin had picked the right moment to decide on a change to his career.

The Victorian College of Optometry then was a very small under-funded professional college but some momentous changes were underway. The college had just moved from its rented fourth-floor premises in the city to its own building in Carlton; I had been appointed the first full-time lecturer in the college two years earlier; and The University of Melbourne had agreed in the previous year to offer a four-year degree course in optometry to be taught in conjunction with the college. Negotiations for affiliation with the university were underway to establish a close link between the college and the university.

The college had thought it was ready to appoint a second full-time lecturer in 1960, the year before Barry Collin took that walk up the stairs to have coffee with me.[1] It advertised the position in 1961 but decided in October of that year it could not make an appointment because of the uncertainty of its finances.[2] Instead, somewhat timidly, the college council appointed Barry Collin as a temporary assistant lecturer for one year. Whether the decision was timid or not, it was the right decision, as subsequent events were soon to show.

Barry Colin started in January 1962 and was immediately given a back-breaking teaching load of 23 hours contact a week and told that he should do some research. He was told this because the Director of Studies, John Nathan, had properly decided that we had to have a research program now optometry was taught in a university. Part-timers John Nathan and Geoff Henry[3] and I had recently embarked on a research program on abnormal colour vision and the new boy, Barry Collin, had to pull his weight too.

Professor RD Wright, Professor of Physiology and a most colourful personality in the university,[4] asked Barry Collin to come to his office to discuss the possibility of a research project that he could pursue.[5] The research project was to explore whether lymphatic vessels would proliferate into the tissue of an injured cornea. If they did, it would help explain corneal graft rejection. Lymphatic proliferation into the cornea was considered unlikely because the cornea is not vascular. Professor Wright had put his idea to some of his ophthalmological colleagues but none was keen to pursue it.

Barry Collin pursued the idea with great tenacity. Tenacity was needed because he had scant resources for research, scant time for research because of his teaching load, and lymphatic vessels are elusive. Tenacity brings its rewards because I can recall being invited into his tiny office, which served also as his microscopy room, to view a brilliant visualisation of single cell walled lymphatics that he had induced to proliferate into the cornea.

This personal demonstration was quickly followed by the publication of three important papers in 1966. Two were in *Investigative Ophthalmology* and one in *Lancet*. The second paper in *Investigative Ophthalmology* was thought sufficiently important by the editors for one of the photomicrographs in the paper to be used for the front cover illustration for the issue. The paper was later selected for reprinting in the *Year Book of Ophthalmology* for 1966–1967.

This work was remarkable in several ways. It elucidated corneal response to injury and brought understanding to the processes of graft rejection. This was important to ophthalmologists. It was significant for optometrists because it showed that optometry could play in the big league of science and medicine.

Contemporary readers may wonder at this. They need to be reminded that prior to 1960, there was very little research in optometry in Australia and no research of substance with the exception of Joseph Lederer's work at the University of NSW on optical aids for low vision and Don Schultz's work on optics at the University of Adelaide.

The profession was proud of Barry Collin's research achievements that broke new ground for optometric scientific endeavour. He was awarded the International Optical League Medal in 1969 to recognise his outstanding contributions to the advancement of the science and the profession of optometry. In 1977, the Australian Optometrical Association created a research medal to recognise research excellence and named the medal in his honour. In 1981 he was made an honorary life member of the Australian Optometrical Association and of the Victorian College of Optometry.

Even the medical profession was impressed. Barry was awarded the Shorney Prize by the Faculty of Medicine of the University of Adelaide in 1971. This prize is awarded for the most significant contribution to knowledge in ophthalmology over the previous three years.

Barry presented his work on lymphatic vessel proliferation into the vascularised cornea for a Masters degree, awarded in 1966, and a PhD degree that was conferred in 1970. This was the first PhD awarded to a Victorian optometrist and the second in Australia, the first being awarded to Dr George Amigo in the University of NSW.

Barry Collin's mentor, Professor Wright, introduced him to Lord Howard Florey, a Nobel laureate and Professor of Pathology at the University of Oxford, who in turn invited Barry to spend a year in Oxford. Readers will recall that it was Florey's work with Ernst Chain on antibacterial substances and antibiotics that lead to the development of penicillin. Florey was a famous Australian and his image adorned the Australian $50 note for some time.

As a result of the invitation of Lord Florey, Barry spent 1968 as a research fellow in the Sir William Dunn School of Pathology and the Physiology Laboratory in Oxford. Important work on the ultrastructure of corneal lymphatic vessels emerged from this sojourn which was published in journals such as *Experimental Eye Research*, *Investigative Ophthalmology* and the *Journal of Pathology*.

By this time the temporary assistant lecturer appointed in 1962 had found some academic security. In 1964 he was appointed lecturer in the Victorian College of Optometry and in 1966 he was promoted to senior lecturer. In 1973 the University of Melbourne established the Department of Optometry, which took over responsibility for teaching the optometry and vision science subjects from the Victorian College of Optometry. Barry Collin's employment was transferred from the college to the university and in that same year the university promoted him to the prestigious rank of reader, which at the time was the rank within the university that recognised outstanding research achievement.

Over the next few years, Barry Collin's research broadened to explore a wide range of questions to do with the histopathology of the anterior eye disease. It was advanced by a sabbatical in the Eye Research Institute and Department of Ophthalmology at Harvard University in Boston.

It should be said at this stage that although the results of Barry's main research efforts were largely published in international medical and ophthalmological journals, he was at pains to communicate also with his optometric colleagues. He has published numerous papers in this journal and its predecessor, the *Australian Journal of Optometry*, and in the *Journal of the American Academy of Optometry*. These have covered a diversity of topics including clarifying the criteria for referral for glaucoma at a time when there was undue reliance on tonometry, colour vision defects acquired through ocular disease, the complications of chloroquine, indus-

trial eye injuries and corneal disease. He was also much in demand on the continuing education circuit in every State of Australia and numerous Asian-Pacific countries, from optometrists keen to draw on his knowledge and insights in ocular pathology.

In 1982 Barry was appointed to the Chair of Optometry at the University of NSW in Sydney, succeeding Professor Josef Lederer who was the foundation professor of optometry at that University.

As Head of the School of Optometry, he reorganised the undergraduate course to give it a stronger base in the bio-medical subjects and to enhance teaching of diseases of the eye. The revised course encompassed the training needed for use of diagnostic drugs, which to that point had been given as a post-graduate course. He promoted the research of the school through his own efforts, by encouraging others and by assembling new staff with strong research credentials. He brought to the school a steady progression of research grants from the National Health and Medical Research Council and the Australian Research Grants Scheme. His research continued to flourish and in 1991 he was honoured by being elected a fellow of the Royal College of Pathologists London, the only optometrist to be a Fellow of that august clinical and scientific body.

In 1992, he stepped down from the arduous demands of head of school and in 1994 retired from the University of NSW but remains a Professor Emeritus of the University. His research has not finished and publications have continued to flow from his pen, including some fascinating work done with his son, Shaun, on the fine structure of the eyes of aquatic biota. Shaun is Associate Professor in the Department of Anatomical Sciences at the University of Queensland. Barry has published some 20 papers since his retirement in 1994, of which more than half have elucidated the ocular anatomy of marine life and found publication in journals such as *Histology and Histopathology.* He also assembled his work into a thesis entitled 'The pathology and morphology of the eye' for which the University of NSW admitted him to the senior degree of Doctor of Science.

He has returned to his home town of Melbourne and holds a Professorial Fellowship in the University of Melbourne, but he is peripatetic. He holds a visiting professorship in the University of Auckland and an Honorary Professorship in the Hong Kong Polytechnic University, both of which he has visited regularly to teach undergraduates and foster research.

In 1997 Barry Collin was appointed a Member in the Order of Australia to recognise not only his contributions to optometry and the science of medicine but also his contributions to his church and its schools, to the Australian Youth Choir as a tour manager and patron, and as trustee to the Australian Youth Performing Arts Foundation.

Most importantly for this Journal and its readers, he accepted Editorship of the CEO in 1993 and in that role is custodian of its standards and mentor to aspiring contributors to its pages.

REFERENCES

1. The Minutes of the meeting of the Council of the Victorian College of Optometry held on July 16 1960 record that I asked if Council might at this stage consider the possibility of appointing another full-time member of the teaching staff and two months later on September 27 1960 the Director of Studies John Nathan moved, seconded by Cyril Kett, that council approve an advertisement early in 1961 calling for applications for a second full-time lectureship.
2. At the meeting of council on June 28 1961, council resolved to defer appointment of a lecturer until the negotiations for affiliation of the college to the university were concluded. The thought was that the position would be more attractive to applicants if it were a university appointment. However, the minutes in 1961 also record council's concern about the finances of the college and progress in negotiations with the State Government Director of Finance for a larger State grant. On October 25 1961, council agreed that an appointment to the new post of lecturer could not be made without assurances of additional funding from the Director of Finance. This is curious because at the preceding meeting on September 27 council received a report from council chairman, Geoff Henry, that the Director of Finance had advised him that the Government intended to write off the college's overdraft over three years and that the operating grant for 1962 would be £10,000 ($20,000), some three times the current state grant. However, despite the promise of more generous government funding, council clearly decided it would be financially much safer to make a short term junior appointment and it agreed to offer Barry Collin a one-year appointment as assistant lecturer. A construction that can be placed on this record is that the council was not too impressed with the quality of the applicants for the advertised position and used finances as an excuse for appointing a person who was not an applicant but whom it saw as having better potential than any of the applicants.
3. John Nathan was the Director of Studies at the time. This was a part-time position and John was in full-time private practice. He held a first class honours BSc degree in physiology as well as his optometric diploma, which was a good foundation for these early research efforts. His contributions to the literature and the development of academic optometry were to be recognised later by the award of an honorary Doctorate of Science in the University of Melbourne. Geoff Henry was the first vice president of the college council and, as the presidency was titular and the president did not usually attend meetings, he was also chairman of the college council. Geoff also had a first class BSc degree. Later he was to sell his optometric practice to take up an appointment as Research Fellow in the John Curtin School for Medical Research in the Australian National University, where he earned an international academic reputation for his research. He was awarded a DSc for his research on the visual cortex.
4. Professor Sir Roy Douglas Wright AK DSc MBBS FRACP was Professor of Physiology in the University of Melbourne from 1939 to 1971 and was later Chancellor of the University from 1980 to 1989. He advised the leaders of the optometry profession who were responsible for setting up the Victorian College of Optometry in 1939 and 1940 and helped plan the first four-year optometry course. He was involved again when the optometry course was transferred to the university. He was a colourful supporter of causes as his biography 'Pansy Wright—A biography of Roy Douglas Wright' by Peter McPhee (1999) attests. He challenged students, colleagues and institutions, asserting at one time: 'Whatever you do, whether you do it well or do it badly, do it brilliantly. Avoid mediocrity on all accounts'.
5. It is not clear why Professor Wright summoned Barry Collin to his office to talk about research. Barry Collin does not know. However, at the time negotiations leading

to affiliation between the college and the university were in progress and the Director of Studies, John Nathan, and the council chairman, Geoff Henry, would have attended meetings at which Professor Wright would have been present because he was a senior professor in the university. His future second wife, Meriel Wilmot, was the secretary of the College of Optometry, which may have given him further reason to know what was happening in optometry and have an interest in it. John Nathan had studied for his BSc degree and had contemplated postgraduate studies in the physiology department and had known Professor Wright for 20 years. Most likely it was John Nathan who mentioned that Barry Collin had joined the staff of the college and that he had a BSc degree in pathology and an interest in histopathology. Professor Wright was to be Barry Collin's mentor for the next 20 years and they formed a close friendship that endured until Professor Wright's death in 1990.