

'THE MOST POWERFUL MEDICAL MAGNET IN EUROPE': EDINBURGH UNIVERSITY'S MEDICAL SCHOOL AND THE OVERSEAS WORLD, 1880–1914

I Wotherspoon, Freelance Historian and Writer, Edinburgh

The international influence of Scottish medical education has long been one of its distinguishing features.¹ This was particularly evident at the end of the nineteenth century when British expansion overseas provided new areas of influence for Scotland's medical schools and enhanced opportunities for students from abroad wishing to study medicine in Scotland. The interface that developed then between medical education in Scotland and the overseas world was vibrant and multifaceted. Awareness of the educational challenges and emerging professional medical opportunities hastened the engagement of Scotland's universities, and the Scottish Extra Mural Schools, with the healthcare needs of evolving communities abroad. The contribution of Scottish trained doctors to global healthcare during this period is well recognised, but the institutional dynamics that moulded their interests and shaped their careers abroad have been little studied. Focusing on the University of Edinburgh's Faculty of Medicine, then the largest in Scotland, this article examines how one Scottish medical school responded to the health and social challenges posed by the growth of an Empire on which the sun never set.

The University of Edinburgh has had a long history of contact with scholars and academic institutions outside Scotland. Nowhere was this more marked than in medical education, where Edinburgh's position was both as a centre of theoretical learning and vocational training.² The academic and clinical achievements of men such as Simpson and Lister were complemented by practical improvements in hospital and teaching accommodation. A new medical school was opened in premises adjacent to the then new Royal Infirmary in 1884 (see Figure 1). At the same time, the curriculum was progressively overhauled to ensure an academic

culture and framework appropriate for a new imperial age. Certificate and Diploma courses in the diseases of tropical climates, and in tropical medicine and hygiene, for example, were introduced in 1899 and 1905 respectively.³ Moreover, *ad hoc* courses were provided for medical students seeking appointments in India, Africa and elsewhere.⁴

Contemporaries certainly recognised the importance of the overseas world to the Faculty of Medicine. Britain's expanding Empire not only reinforced a web of established relationships and employment opportunities, but also provided opportunities for students from newly colonised areas. 'At the present time the largest number of our students is not derived from Scotland,' the Dean of the Faculty of Medicine and subsequently a President of the Royal College of Physicians of Edinburgh, Professor Sir TR Fraser, told a luncheon meeting in 1884,

Many come from England, and a very considerable number from the great Australian colonies, and from India, Canada and South Africa. We must no doubt anticipate that the formation of well-equipped (medical) schools in countries that greatly assist in filling our classrooms will result in . . . lessening our supplies from these sources. [But] if any gloomy forebodings should be entertained, I think they must be removed by the consideration that large areas of the Earth's surface still remain uncolonised . . .⁵

That Edinburgh's medical school had an influential and ongoing overseas role was a theme often rehearsed. 'As Great Britain stands in the relation of Mother to the Colonies,' the Dean of the Faculty of Law noted in 1902, 'so amongst British Universities this University has long been *par excellence* the *Alma Mater* of colonial



FIGURE 1
The 'New' Edinburgh Medical School in 1884. Courtesy of Edinburgh University Archives.

HISTORY

youth.⁶ Sir Francis Gordon Bell (MBChB 1910) later endorsed this view, recalling that Edinburgh was then seen as 'the Mecca for prospective Medical students from New Zealand.'⁷ In the case of students from southern Africa, Edmund Burrows similarly concluded that it had been nothing less than 'the most powerful medical magnet in Europe'.⁸

Three major factors shaped the relationship of Edinburgh University's medical school with the wider world and deepened its involvement in imperial affairs between 1880 and 1914. The first was the increase in the number of students from abroad enrolling to study medicine at Edinburgh. The second was the slow pace at which Western medical training was introduced in other parts of the world. The large number of Edinburgh medical graduates finding employment, or service opportunities, throughout the Empire and beyond was the third.

Increasing numbers of undergraduates came to Edinburgh from areas of formal and informal British influence as diverse as Mauritius and China as well as from established settlement colonies, such as New South Wales or the Cape Colony, where there were often sizeable numbers of Scottish immigrants. Indeed, so great was this influx that overseas-born student numbers increased from 400 in 1880 to nearly 700 in 1914. In that year, overseas-born students, the vast bulk of whom hailed from the British Empire, accounted for nearly one-quarter of the University's enrolments overall. Significantly, over 80% of them came to Edinburgh University to study medicine.⁹ 'They were all there,' wrote Richard Berry (MBCM 1891, MD 1894) remembering his student days in the 1880s, 'English, Scottish, Irish, Welsh, West Indians, black men from the Sudan, princes from India, yellow men from China and Japan – we were a motley crowd – Australians, South Africans and New Zealanders, and even one or two Americans from Buffalo and California.'¹⁰ His assertion that Edinburgh was 'the most cosmopolitan university in the world' may have been something of an overstatement, but it certainly highlights how important the University had become as a medical training centre for young people from abroad.

Underpinning the growth in overseas student numbers was the demand for tertiary education by often privileged elites living in societies where the availability of medical teaching was restricted. In India, for example, there were only a very limited number of places available for those wishing to study medicine. By 1896, the Universities of Bombay, Calcutta, Madras and the Punjab together had a combined enrolment of only 1,067 medical students of whom just 76 graduated that year.¹¹

The problems facing the development of medical education in India were not too different from those

met in Australasia and southern Africa, where local provision was either insufficient to meet demand, or non-existent. Australia's first medical school opened at the University of Melbourne in 1862. Two further schools were established subsequently at the Universities of Sydney and Adelaide in 1883 and 1885 respectively. These new institutions all faced constraints on student numbers arising from the limited extent of teaching resources and restricted availability of hospital training facilities. TP Anderson Stuart (MBCM 1880, MD 1882, LLD 1900), who arrived in Australia in March 1883 as Sydney's first Professor of Anatomy and Physiology, recalled that his teaching accommodation then consisted of the 'foundations of a little four bed roomed cottage, and walls about half way-up. It was in this that I was to begin the Medical School a few days later.'¹² Medical faculty matriculations remained modest in colonial institutions such as Melbourne where they did not exceed 300 in total until 1907.¹³ In the same year nearly 1,500 students matriculated to study medicine at the University of Edinburgh. The position was not dissimilar in New Zealand where the medical school at the University of Otago had only 155 students in 1914.¹⁴ In southern Africa it was not until 1904 that a start was made with the development of formal medical education when the University of Edinburgh recognised the first year of the medical course at the South Africa College in Cape Town.¹⁵

By contrast, the accelerated development of medical education in Canada and the US led to a reduction in the number of North American students matriculating to study medicine at Edinburgh University between 1880 and 1914.¹⁶ As new and expanded medical teaching facilities became available in both countries, the numbers of American and Canadian students seeking a medical education at the University of Edinburgh gradually declined, such that in 1914 only a handful matriculated for the MBChB degree course.¹⁷

Not all overseas-born students returned 'home' on completing their studies. Some travelled extensively before going into practice in Europe or elsewhere. CV Delepine (MBCM 1881) from Switzerland, for example, made his career in the USA. Others stayed on in Britain where they became closely involved with the communities in which they lived. MM Mamourian (MBChB 1904) from Smyrna on the Levant (Izmir in present day Turkey) practised for much of his life in Lancashire, England. Moreover, some graduates who worked abroad returned to Edinburgh where they drew on their overseas experience. After a distinguished career as a researcher at the King's Institute of Preventive Medicine in Madras, for example, WS Patton (MBChB 1901) entered academia, being appointed Lecturer in Medical Entomology at Edinburgh University in 1921.¹⁸

Probably the most important factor powering the



FIGURE 2

**The University of Otago Buildings, c. 1890 where medicine was taught as in Edinburgh (c/neg E4909/4).
Permission to reproduce this image has been granted by the Hocken Library, Uare Taoka o Hakena, University of Otago, Dunedin.**

international focus of Edinburgh's medical school between 1880 and 1914 was the increasing number of medical graduates who took up employment abroad. Nearly one-quarter of the 9,000 or so students who graduated in medicine during this period pursued careers overseas, most of them in the British Empire.¹⁹ The geographic distribution of those Edinburgh graduates who went abroad was largely, though not exclusively, shaped by the parameters of the Empire. Nearly half of them worked in Australia, Canada, New Zealand and southern Africa. A further quarter worked in India, or in other parts of Asia such as Hong Kong, or the Straits Settlements. The remainder were to find employment in new areas of British rule north of the Orange and Limpopo Rivers, or in locations where British influence was largely exercised informally, such as China.

Many Edinburgh University graduates pursuing careers abroad joined existing groupings of Scottish-trained, often Edinburgh-qualified, medical practitioners who provided a professional base which served to integrate them into local society. This is clearly evident in Australia where there was a sizeable community of Scottish-trained practitioners with a common background and shared interests. Noting that more Australians qualified in Scotland in the second half of the nineteenth century than in Australia, Geary has calculated that, of the 260 or so Australians who qualified in medicine at a university in Scotland, some 75% did so at Edinburgh, representing nearly 20% of all Australian doctors qualified between 1850 and 1900.²⁰ Similarly, Edinburgh University graduates also made up a significant proportion of the medical profession in New Zealand. Indeed, Wright-St Clair has noted that, as late as 1939, nearly 20% of those on the New Zealand register were Edinburgh graduates, or held higher Edinburgh medical qualifications.²¹ In South Africa the numbers and influence of Edinburgh medical graduates

was even greater. Heyningen has calculated that by 1910 over 60% of the total number of practitioners on the Cape register had qualified at Edinburgh University.²²

The involvement of Edinburgh medical graduates overseas focused on two key areas – the development of the practice of medicine and nurturing the growth of tertiary medical teaching facilities. They were familiar with the latest thinking and practice in new areas of activity, such as antiseptic surgery, and were anxious to build on their Edinburgh-acquired knowledge and expertise in the context of the societies in which they lived overseas.

In Australia, Edinburgh graduates played a leading role in promoting 'modern methods' and in the introduction of antiseptic surgery.²³ They were also prominent in teaching. At the University of Sydney, Anderson Stuart surrounded himself with Edinburgh graduates, such as Alexander McCormick (MBCM 1880, MD 1885) and James Graham (MBCM 1882), who, respectively, taught surgery and midwifery. In New Zealand, John Haliday Scott (MBCM 1874, MD 1877), appointed Dean of the Faculty of Medicine at the University of Otago in 1891, was 'meticulous in the presentation of anatomical knowledge as acquired and taught in Edinburgh' (see Figure 2).²⁴ In North America, Edinburgh graduates also made an important contribution to medical education at a time when the medical profession there was seeking to meet the challenges arising from industrialisation, immigration and urbanisation. Examples include JC Webster (MBCM 1888), who was Professor of Obstetrics at the University of Chicago, and A Hunter (MBChB 1901) who held the Chair of Pathological Chemistry at Toronto University.

A similar pattern emerges in southern Africa where Edinburgh graduates formed a close knit community. CL Herman (MBCM 1881) criticised the deficiencies in

HISTORY

existing health legislation and was a keen supporter of the need for comprehensive medical training in southern Africa. With his friend, JHM Beck (MBCM 1879, MD 1890), he actively promoted the establishment of the South African Medical Association in 1883, and the publication of the *South African Medical Journal*, of which one of the first editors was GG Eyre (MBCM 1885).²⁵

Elsewhere in Africa, Edinburgh University medical graduates of the day operated within the framework of evolving colonial institutions and related commercial, educational and missionary platforms. Coming to Africa at a time of unprecedented change, they were, inevitably, involved in the transfer of knowledge and skills acquired at Edinburgh University. Of particular interest is the emergence of African medical graduates, such as Obadiah Johnson (MBCM 1886, MD 1889), who was Medical Officer in Lagos from 1890–7. Johnson believed that African doctors had unique cultural insights which could significantly add to improvements in public health on the continent. This view was put to the test in 1901 when he was appointed to the Legislative Council. There he was largely responsible for the substantial upgrading of environmental health and sanitation in Lagos.²⁶

Asia provided a diverse range of employment opportunities for Edinburgh University medical graduates between 1880 and 1914. Whilst most of those working in India found employment with the Indian Medical Service (IMS), the Royal Army Medical Corps (RAMC) and the Women's Medical Service, India, others went into private practice, or served as missionaries. There were also teaching appointments in the fledgling colleges and universities in the continent as well as opportunities to work for commercial organisations as a plantation doctor in places like Sarawak. Graduates also provided medical support in mission stations along the south China coast and in Manchuria. Perhaps one of the most distinguished missionaries to serve there was a Fellow of the Royal College of Physicians of Edinburgh, Dugald Christie. During a remarkable career, he pioneered, often at great personal risk, the introduction of Western medical care in the harsh environment of Shenyang (Moukden) in north-east China. Others followed more esoteric career paths. The irrepressible Australian, George E Morrison (MBCM 1887, MD 1895), for example, was for many years *The Times* correspondent in Beijing, the confidant of diplomats and, latterly, an adviser on political matters to Yuan Shih-k'ai, the first President of the Chinese Republic.²⁷

The IMS was of particular importance in providing career openings for Edinburgh graduates. Between 1839 and 1860, 18% of all IMS recruits were graduates of Edinburgh University. Between 1865 and 1914, Edinburgh University provided even more, accounting for some 20% of total IMS recruits in this period.²⁸

Interestingly, none of the 'native' Indian students joining the IMS from Edinburgh University during this period were promoted to the highest ranks of the Service. Reasons are not difficult to suggest. As in other components of the public service, racial distinctions were then firmly institutionalised in such matters as pay and conditions of service. There was also a widespread, misplaced, impression that Indian recruits were incapable of performing their duties as ably as a European officer. Writing in 1914, the IMS's apologist and voluble historian, DG Crawford (MBCM 1881), echoed this view when he noted that 'the members of the European Services prefer a doctor of their own class for themselves, and still more for their wives and families . . . for the native practitioner, however skilled, is often apt to lose his head at a critical moment, rather than rise to a sense of responsibility'.²⁹

To meet the vocational challenge of ensuring that Edinburgh's position as a leading provider of trained medical manpower for the Empire and elsewhere was recognised, and the interests of its graduates protected, Medical Faculty staff and graduates frequently attended overseas academic conferences and meetings of organisations such as the Royal Colonial Society. Honorary degrees were awarded to eminent academics, graduates and politicians with overseas connections who might be able to assist the University in achieving its ambitions abroad for its graduates, or whose association with the University reinforced its status as a major international institution. Sir Alfred Keoch, for example, the Director-General of the Army Medical Service, was awarded an LLD in 1909. Anderson Stuart, Dean of the Faculty of Medicine at the University of Sydney, was similarly honoured in 1900. In 1911, LLDs were conferred on the Premier of Newfoundland, the Governors of Fiji, Jamaica, Southern Nigeria and the Straits Settlements, the High Commissioner of Cyprus and the Commissioner of the British Central Africa Protectorate.³⁰ Clearly, the University's laureations kept pace with imperial growth.

At a more practical level, the University regularly monitored the number of appointments secured by its graduates in the IMS and the RAMC and actively sought to facilitate their recruitment.³¹ The importance of these organisations as providers of good graduate employment opportunities was lost on nobody. Moreover, when opportunities arose, the University also sought to play an international advisory, or consultancy, role on issues as diverse as the terms under which its medical graduates might practice in Italy, or the establishment of a new medical school in Constantinople. The funding of scholarships for overseas students to study in Edinburgh was also actively pursued with individuals and colonial administrations. In 1901, for example, the Straits Settlements agreed to fund a Prize in tropical medicine.³²

Sir Arthur Conan Doyle followed suit in the following year by funding a prize in medicine for students from southern Africa.³³

The growing involvement of Edinburgh University's medical school with imperial issues, and interest in medicine in the tropical and sub-tropical world, was complemented by an increase in research into different aspects of those particular medical issues and problems encountered abroad. One valuable source for this, which further demonstrates the international dimensions of the University's influence in this period, is its collection of MD theses submitted for the award of the degree of Doctor of Medicine (MD).

Between 1880 and 1914 just over 2,100 MD degrees were awarded, of which 360 went to graduates either born or resident abroad. Of the MD degrees awarded to such graduates, about half were concerned with medical matters that were specific to overseas locations. Whilst those theses relating to the public health and medical problems of established British territories, such as India and the 'white settlement colonies', provide an interesting commentary on particular health issues in these locations, it is the theses related to new areas of British rule and informal intervention that illustrate the extent to which Edinburgh medicine shadowed imperial growth. Moreover, what makes these theses of interest is that they not only discuss medical conditions of significance to different regions, but also the methods by which illness had been, or was being, treated.

The medical problems arising from British expansion into new areas of influence is a major theme in many of the MD dissertations relating to Africa. Physicians, such as WH Prentice (MBChB 1901, MD 1904), provided information on the action of, and antidotes to, African cobra venom.³⁴ AH Hallen (MBCM, 1889, MD 1892) described the medical effects of climate in the intertropical coastal regions of Africa.³⁵ RAL van Someren (MBChB 1904, MD 1910) provided details of his research into sleeping sickness in Uganda.³⁶ W Rogers (MBChB 1900, MD 1911) commented on factors, such as poor sanitation and high infant mortality, which constrained the size and growth of the native African population.³⁷ Here, indeed, Rogers was directly and explicitly addressing the issue of Empire-building. 'The great problem in the opening up of Africa,' he wrote, 'is the procuring of sufficient native labour to cultivate the soil, and exploit the mineral wealth of the country.' Arguing that, if adequate education and healthcare were provided for Africans by white colonisers, he could see 'no reason why Africa should not become as rich a country as India . . . The negro is passionately fond of children and multiplies rapidly in favourable circumstances. Unlike other uncivilised races . . . he flourishes well under white rule . . .'³⁸

Rogers' views on the role of medicine in imperial development were echoed by other graduates of the period who were closely involved with that process. In the south-west Pacific, for example, JW Williams (MBCM 1891, MD 1898), a missionary with the Melanesian Mission, believed that the interests of missionaries and administrators converged as he commented, with evident sympathy, on the problems faced at Tulagi in the Solomon Islands by CM Woodford, the newly arrived British representative.³⁹ His views were shared by others in the Pacific. In his pioneering contribution to Western understanding of Polynesian medicine, WH Goldie (MBCM 1897, MD 1899) suggested that

. . . information concerning the exact distribution of the various diseases in these regions . . . is becoming necessary, owing to the enormous expansion of the British Empire, and the gradual spread of Europeans over these islands. Of great importance, too, is such knowledge to the medical officer about to enter the Polynesian branch of the colonial service, to the medical missionaries preparing to work among these cannibals and savages . . . and to the colonists also.⁴⁰

Edinburgh graduates also worked and studied in areas where British influence was exercised informally. Between 1880 and 1914, for example, two MD dissertations were submitted on disease in Japan, one (cancer in Japan) by G Munro (MB 1888, MD 1909), the Medical Director of Yokohama General Hospital, being an important contribution to the statistical analysis of the incidence of the disease in Asia.⁴¹ The research by JC Thompson (MA 1884, MBCM 1888, MD 1892) was concerned with surgical practices then current in China.⁴² The analyses were sympathetic. He thought his House Surgeon, who held a Diploma from the Medical College at Tientsin (Tianjin) 'as capable as were he a Scotch graduate with an Edinburgh training'. In 1908, ET Pritchard (MBCM 1885, MD 1908) was awarded an MD for his thesis on general medical practice and opium abuse in Peking (Beijing).⁴³ EW Smerdon (MBChB 1908, MD 1913) sought to compare the historical development of Chinese and Western medicine.⁴⁴ Contact with China was extensive and even reached into Tibet. HM Stumbles (MBChB 1902, MD 1910) submitted a thesis on medicine and surgery in Central Asia.⁴⁵ Stumbles' remarkable dissertation, which in places reads like a tale in the *Boy's Own Paper*, provides a lively assessment of medical and social conditions in what he describes as the 'closed land of Tibet' in the first decade of the twentieth century. It also highlights the pioneering role Edinburgh medical graduates were taking, not only in describing a range of medical problems for their University and their peers, but also in drawing attention to the importance of social and political factors for health issues arising in this period at the farthest limits of British influence.

HISTORY

The clinical and geographical diversity of the coverage of these MD theses is yet another indicator of the close partnership that had evolved at the end of the nineteenth century between Edinburgh medicine and the overseas world. The University, and its medical school in particular, served the international community and benefited from the multicultural exposure imperial expansion provided. As we have seen, a steady stream of undergraduates from across the Empire and beyond was drawn to Edinburgh University to study medicine. Edinburgh University became a leading provider for the overseas world of trained medical personnel and professional medical expertise. Edinburgh graduates took a leading role in the establishment of new medical schools abroad, where Edinburgh-derived learning and practices were frequently replicated.

The growth of British influence overseas provided professional opportunities and challenges for medical graduates in the settlement colonies, in new areas of British influence in Asia, Africa, the Pacific and elsewhere. Their success was due, in part, to their professional skills honed at their *Alma Mater*. But their employment and endeavours abroad were facilitated by their University's perceptive understanding of the importance of the overseas world to the reputation and success of its medical school. At the high tide of Empire, Edinburgh University's willingness to embrace a range of international issues ensured for 'the most important medical magnet in Europe' a key role, and an enduring legacy, in the practice and history of imperial medicine.

REFERENCES

- 1 See for example: Brunton DC. The Transfer of Medical Education Teaching at the Edinburgh and Philadelphia Medical Schools. In: Sher RB, Smitten J, editors. *Scotland and America in the Age of Enlightenment*. Edinburgh: Edinburgh University Press; 1990; 242–58. And Thomson JT 'The Scottish Colleges – Teaching and Examining abroad'. In: Dow DA, editor. *The Influence of Scottish Medicine*. Carnforth, Lancs and Park Ridge, NJ: The Pantheon Publishing Group for The Scottish Society of the History of Medicine; 1988; 159–70.
- 2 Underwood EA. *Boerhaave's Men*. Edinburgh: Edinburgh University Press; 1977; 88–126.
- 3 University of Edinburgh. *Edinburgh University Calendar, 1899–1900*. Edinburgh: James Thin; 1899; 346. And University of Edinburgh. *Edinburgh University Calendar, 1905–1906*. Edinburgh: James Thin; 1905; 450.
- 4 University of Edinburgh, University Archives, (Da 31.5). College Minutes (Minutes of Senatus), Meeting of 12 May 1905; **13**:360–1; Meeting of 26 March 1910; **15**:227.
- 5 University of Edinburgh. *Records of the Tercentenary Festival of the University of Edinburgh celebrated in April 1884*. Edinburgh: William Blackwood and Sons; 1885; 70.
- 6 University of Edinburgh. University Archives (Da81.2). Laureation Addresses by Professor Sir Ludovic J Grant, Bart, Dean of the Faculty of Law, 1894–1910; (**2 Vols**) **1**:132.
- 7 Bell FG. Period Piece, 1905–10. In: *University of Edinburgh Journal*. Edinburgh: Edinburgh University Graduates' Association; 1962; **20**:215.
- 8 Burrows EH. *A History of Medicine in South Africa*. Cape Town/Amsterdam: AA Balkema for the Medical Association of South Africa; 1958; 149.
- 9 Extrapolated by the author from University of Edinburgh, University Archives. Matriculation Album, 1880–1 and 1913–14.
- 10 Berry RJA. Chance and Circumstance, typescript autobiography. University of Edinburgh. University Archives (DK 2.36), Undated (probably 1952), 24–25.
- 11 Jeffrey R. *The Politics of Health in India*. London: University of California Press; 1988; 78–82.
- 12 Epps W. *Anderson Stuart, MD, Physiologist, Teacher, Builder, Organizer, Citizen*. Sydney: Angus and Robertson; 1922; 50.
- 13 University of Melbourne. *Medical School Jubilee, 1914*. Melbourne: Ford and Son; 1914; 107–08.
- 14 Thompson GE. *A History of the University of Otago, (1869–1919)*. Dunedin: J Wilkie and Co. Ltd; 1920; 285.
- 15 *Standard Encyclopaedia of Southern Africa*. 12 Volumes (1970–6). Cape Town: NASOU; 1971; 290 (Vol. 7).
- 16 Rothstein WG. *American Medical Schools and the Practice of Medicine*. New York: Oxford University Press; 1987; 92, 104.
- 17 University of Edinburgh, University Archives. *Matriculation Album, 1913–14*.
- 18 *University of Edinburgh Journal*. Edinburgh: University of Edinburgh Graduates' Association; 1962; 20; 83.
- 19 Extrapolated by the author from the graduation lists in University of Edinburgh, *Edinburgh University Calendar*. Edinburgh: James Thin; 1879–80 to 1914–15.
- 20 Geary LM. The Scottish–Australian Connection, 1850–1900. In: Nutton V and Porter R, editors. *The History of Medical Education in Britain*. Amsterdam–Atlanta: Rodopi; 1995; 53, 66.
- 21 Wright-St Clair RE. The Edinburgh influence on New Zealand medicine. In: *Proceedings of the XXIII International Congress of the History of Medicine*. 2 Vols. London: Wellcome Institute for the History of Medicine; 1974; 1; 752.
- 22 Heyningen van EB. Agents of Empire: The Medical Profession in the Cape Colony, 1880–1910. In: *Medical History*. London: Wellcome Institute for the History of Medicine; Vol. 33; 1989; 452–3.
- 23 O'Sullivan DM. The Introduction of Antiseptic Surgery to Australia. In: *The Medical Journal of Australia*. Sydney: Australian Medical Association; 1967; Vol. 11; 897–8.
- 24 Hercus Sir C and Bell Sir G. *The Otago Medical School under the First Three Deans*. Edinburgh: Livingstone; 1964; 223.
- 25 Burrows. *Op. cit.* ref. 8, 350, 355, 365.
- 26 Adeoye A. Some early Nigerian doctors and their contribution to modern medicine in West Africa. In: *Medical History*. Vol. 18. London: Wellcome Institute for the History of Medicine; 1974; 282–4.
- 27 Pearl C. *Morrison of Peking*. Sydney: Angus and Robertson; 1967; 79, 278–9.
- 28 Harrison M. *Public health in British India; Anglo-Indian preventive medicine, 1859–1914*. Cambridge: Cambridge University Press; 1994; 26.
- 29 Crawford DG. *A history of the Indian Medical Service, 1600–1913*. 2 Vols. London: W Thacker & Co; Vol. 2; 383.
- 30 University of Edinburgh. *Edinburgh University Calendar, 1909–10*. Edinburgh: James Thin; 1909; 454. University of Edinburgh. *Edinburgh University Calendar, 1900–01*. Edinburgh: James Thin; 1900; 323. University of Edinburgh. *Edinburgh University Calendar, 1911–12*. Edinburgh: James Thin; 473.
- 31 University of Edinburgh, University Archives (31.5). College Minutes (Minutes of Senatus), Meeting of 1

- December 1906; Vol. 14; 142. College Minutes (Minutes of Senatus), Meeting of 3 March 1906; Vol. 14; 20.
- 32 University of Edinburgh, University Archives (31.5). College Minutes (Minutes of Senatus), Meeting of 25 November 1901; Vol. 12, pps. 9–10.
- 33 University of Edinburgh. Op. Cit. ref. 32. Meetings of 4 and 25 July 1902, pps. 394 and 402.
- 34 Prentice WH. 'Some notes on the action of African Cobra Venom.' University of Edinburgh: Unpublished MD Thesis; 1904.
- 35 Hallen AH. 'The climate of the western intertropical coast regions of Africa.' University of Edinburgh: Unpublished MD Thesis; 1904.
- 36 Someren van RAL. 'Sleeping sickness with special reference to its occurrence in Uganda and the remedial measures instituted.' University of Edinburgh: Unpublished MD Thesis; 1910.
- 37 Rogers W. 'Africa's small population; its cause and remedy.' University of Edinburgh: Unpublished MD Thesis; 1911.
- 38 Rogers. Op Cit. ref. 37. pps. 2 and 5.
- 39 Williams JW. 'The type of malarial fever prevalent in the Western Pacific Islands.' University of Edinburgh: Unpublished MD Thesis; 1898; 3.
- 40 Goldie WH. 'Polynesian medical researches.' University of Edinburgh: Unpublished MD Thesis; 2 Vols; 1899; Vol. 1, 17.
- 41 Munro NG. 'Cancer in Japan.' University of Edinburgh: Unpublished MD Thesis; 1909.
- 42 Thompson JC. 'The History and Present Position of Chinese Surgery.' University of Edinburgh: Unpublished MD Thesis; 1892.
- 43 Pritchard ET. 'General Medical practice in the Chinese Capital with special reference to the Opium Habit in China.' University of Edinburgh: Unpublished MD Thesis; 1908.
- 44 Smerdon EW. 'Chinese Medicine; a comparison with Renaissance and Stuart Medicine.' University of Edinburgh: Unpublished MD Thesis; 1913.
- 45 Stumbles, H. M. 'Medicine and Surgery in Central Asia.' University of Edinburgh: Unpublished MD thesis; 1910.
-