

## THE GLASGOW MEDICAL FACULTY 1869–1892: FROM LISTER TO MACEWEN

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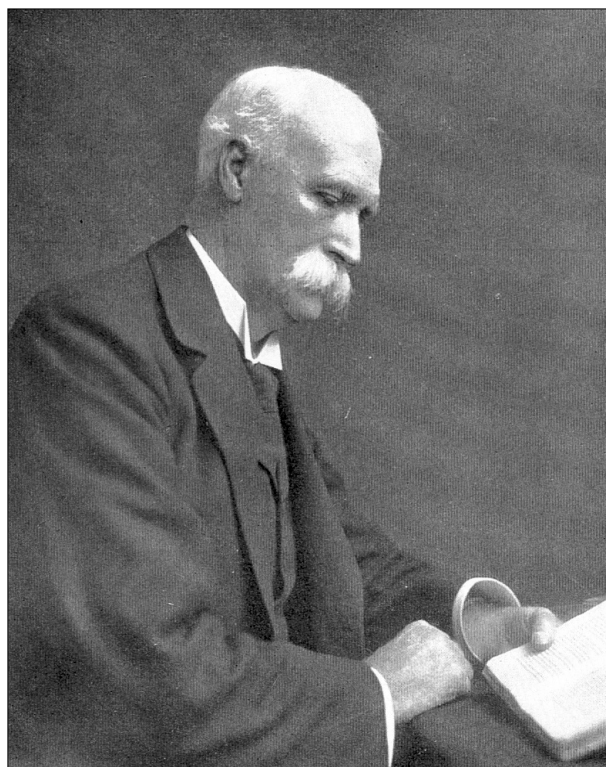
William Macewen (Figure 1) graduated in Glasgow in 1869, the year his teacher, Joseph Lister (Figure 2), moved to Edinburgh; he would succeed him in the Regius Chair of Surgery in Glasgow 23 years later. Bowman was of the opinion that, in its time, no chair in any faculty of medicine was more distinguished.<sup>1</sup> In the interval between their tenures Macewen, based in the Royal Infirmary but not a member of the University medical faculty, dominated the Glasgow medical stage to such a degree that the professors within the faculty, distinguished in their own fields and some with international reputations, were overshadowed by the great man. Their careers as academics, teachers and contributors to developments in the faculty merit examination.

In the two decades after Lister's departure, the faculty faced many changes and challenges. Some, such as the move of the University to the western edge of the city in 1870 and the opening of the Western Infirmary in 1874, had been planned for some years and led to the transfer of University clinical teaching from the Royal Infirmary to the new hospital and the foundation of two clinical chairs (medicine and surgery). Other important issues were: the gradual separation of pathology from physiology; the inauguration of the first hospital for diseases of children in 1882; the evolution of the minor specialities (only ophthalmology was recognised in the first half of the nineteenth century); the creation of the first academic post in mental diseases; and the admission of women to the faculty.

Despite the loss of university status, the powerhouse of surgical research stayed with Macewen in the Royal where he was the first to postulate and practice the principles of asepsis. Under part-time professors, clinical science was not pursued actively in the Western, but in the faculty outwith the clinical field there was great activity, especially in the basic sciences of anatomy, physiology and pathology. The appointment in 1892 of Macewen to the chair of his teacher, Lister, with charge of beds in the Western Infirmary, albeit proffered reluctantly by the management, started a new era in that institution.

In 1870, the members of the faculty with dates of appointment were:

Andrew Buchanan	Institutes of Medicine	1839
Harry Rainy	Forensic Medicine	1841
Allen Thomson	Anatomy	1848
William T. Gairdner	Practice of Medicine	1862



**FIGURE 1**  
**Sir William Macewen.**

From: Bowman AK. *The Life and Teaching of Sir William Macewen*. London, Edinburgh, Glasgow: William Hodge and Co. Ltd; 1942.

John B. Cowan	Materia Medica	1865
William Leishman	Midwifery	1868
George H.B. Macleod	Surgery	1869

These were all Crown appointments. In 1874, Thomas McCall Anderson was appointed to the new Chair of Clinical Medicine and George Buchanan to that of Clinical Surgery. As well as these extra incumbents, the decade of the seventies was a time of several professorial changes. Rainy was succeeded by Pearce A. Simpson in 1872, Andrew Buchanan by John G. McKendrick in 1876, Thomson by John Cleland in 1877 and Cowan by Matthew Charteris in 1880.

Professors who taught only in the first year of the medical course such as John (Soda) Ferguson of Chemistry are excluded from consideration.

During this period, the faculty embraced only two lectureships. Thomas Reid succeeded George Rainy as



**FIGURE 2**  
**Lord Lister.**

From: Cameron HC. *Joseph Lister – the Friend of Man*. London: William Heinemann – Medical Books Ltd; 1948.

the Waltonian Lecturer in Structure and Diseases of the Eye – a post held by William Mackenzie between 1829 and 1868 – in 1869. In 1880 the University instituted a Lectureship on Insanity and appointed David Yellowlees, Superintendent of the Royal Lunatic Asylum, Gartnavel. Short biographies of A. Buchanan, H. Rainy, Thomson and Gairdner have been recorded in a previous paper.<sup>2</sup>

#### THE MEN

##### **John Black Cowan (1828–1896)**

Cowan succeeded Easton in 1865 but poor health ended his professional career at the early age of 51, and so his life was a story of promise unfulfilled.

Born into a family with a long history of medical practice in Glasgow, after the almost mandatory travel round the medical schools of Europe, he was one of a small band of young Glasgow graduates, including G.H.B. Macleod and G. Buchanan, who served as civil practitioners in the Crimea. From 1856 to 1865 he held appointments in medical jurisprudence and medicine in Anderson's College, the training school for many University professors, and enjoyed a large private practice.

His special interest was diseases of children and he had

an ambition to write a textbook on the subject but was thwarted by physical suffering and weakness. His early years in the Chair saw him very active in the Senate. With his great personal and social influence, he was an invaluable help to Professor Thomson in promoting the funds for building the new University and, at a time of medical reform following the birth of the General Medical Council (GMC) in 1858, played a major role on tedious committees. The transfer of the clinical medical school to the Western Infirmary, of which he was for a time a manager, owed much to his industry. Another fundraising duty was served with Sir James Watson and some other friends; they raised £1,100 to help equip the physiology laboratory.<sup>3</sup>

He was a member of a remarkable medical clan; of eight generations, seven counted sons or sons-in-law as medical men.<sup>4</sup> His father, Robert (1796–1841), was a physician in the Royal Infirmary (1836–8) and the first Professor of Medical Jurisprudence in the University (1839–41). One grandfather, also Robert Cowan, a son-in-law of Dr McCaul, Minister of the Tron Church in Glasgow (1782–97) was also a surgeon in the Royal Infirmary for three periods between 1796 and 1807. He was one of a minority of the Faculty of Physicians and Surgeons who opposed the absurd attempt of that body in 1795 to dominate the new institution, the Royal Infirmary, by demanding that its members act in the wards by rotation, each for a short period. This Robert combined his surgical appointment with the Chair of Botany in Anderson's College.<sup>5</sup> The Cowan influence in the Royal Infirmary spread into the twentieth century in the person of J.M. Cowan, son of John B., who was in charge of wards from 1906 to 1930. He was of the group who bridged the gap between the old style and the modern, more laboratory orientated clinician.<sup>6</sup> His textbook *Diseases of the Heart*, written with W.T. Ritchie, was well received. After retiral, he retained enough influence to propose, and see enacted, two policy changes. One was modification of the 'open-door' tradition in the Royal because of gross overcrowding and the other the start of payment to resident staff.<sup>7</sup> J.M. Cowan served in both the Boer and 1914–18 wars and died in 1947.

##### **William Leishman (1834–1894)**

Leishman exercised great influence in his profession and the University scene. His grandfather, Thomas, was a merchant in Paisley; his father, Matthew, Minister of Govan (1821–74); a brother, Thomas, Minister of Linton and Moderator of the General Assembly (1898); his only son, Sir William Boog, Director-General of the Army Medical Corps and a famous pathologist. David W. Runciman, a brother-in-law, was Registrar of University College, Auckland, New Zealand (1894–1907).<sup>8</sup>

He graduated with honours (1855) and spent a short time in general practice. While still a young man, he was elected Professor of Medical Jurisprudence in Anderson's

College but soon turned to obstetrics and, from 1860 onwards, contributed papers on this subject to the *Glasgow Medical Journal*; the most important was entitled 'The Mechanism of Parturition' published in three parts. This established his reputation as a man of mark in the profession and in 1868 he was an obvious choice for the Regius Chair of Midwifery on the death of Dr Pagan.

At this time, midwifery lacked a good textbook in the English language and Leishman devoted himself to correcting the shortcoming. His *System of Midwifery* (1870) enjoyed great success, reaching fourth English and third American editions in 1888. It earned praise not just as a medical work, but as a model of fluent clear language. A great reader of varied literature both English and foreign, especially French and German, his love of letters was reflected in his lectures which were concise and interesting with a distinct scholarly flavour.<sup>9</sup>

Professionally a strong advocate of the influence of nature in the cure of disease, he was opposed to meddling interference in obstetrics.

The Western Infirmary opened a ward for diseases of women in 1877 with Leishman in charge and provided out-patient obstetric facilities by appointing R. Kirk and W.L. Reid as physician-accoucheurs for Partick and Anderston respectively. Reid was President of the Faculty of Physicians and Surgeons (1905–7).<sup>10</sup>

In 1883, Leishman inaugurated a course of summer lectures on diseases of women, charging a fee of two guineas per student. His obstetric beds were in the Glasgow Maternity Hospital (University Lying-in Hospital) founded in 1835. Over the years, it occupied several temporary sites in the east end of the city, including 49 St. Andrew Square and 88 George Street, but by 1864 was located permanently at 37 North Portland Street. Clinical duties were shared with Dr J.G. Wilson, Professor of Midwifery in Anderson's College.

In University affairs Leishman carried great weight as a member of the Court (1889–93) and representative on the GMC (1886–93). On his retiral from the latter, the President, Sir Richard Quain, described him as the ideal councillor. From 1892, he was dogged by ill health and died in office two years later.

### **George Husband Baird Macleod (1828–1892)**

Macleod was a member of a distinguished ecclesiastical family. His older brother, Norman, was the famous minister of the Barony in Glasgow. Their father, also Norman, ministered in the Gaelic Church in Glasgow (later St Columba) and both father and son were Deans of the Chapel Royal in Scotland. Dr George F. Macleod (Lord Macleod of Fuinary), founder of the Iona Community, was a grand-nephew. Over many years the family exerted a powerful influence on social and religious

life in Scotland. George Husband Baird Macleod broke the mould in favour of medicine.

Macleod displayed an early sense of adventure and interest in travel. Soon after graduation (1853), on a yachting tour in the East, an attempt to reach the Crimea was thwarted; he returned disappointed, but did manage to enter the war zone soon afterwards. This was at the request of Mrs Campbell of Garscube whose son (later Sir George Campbell) had been wounded in early battle and needed succour. Macleod travelled night and day, rescued the wounded officer, transferred him to hospital at Scutari and eventually accompanied him home.<sup>11</sup>

His experience led to an interview by the Minister of War about conditions at the front and resulted in the dispatch of wooden huts to replace filthy barracks. Soon, the Government supplemented regular army medical staff with a special body of volunteer civil surgeons; Macleod was offered a post and travelled immediately. His enthusiasm was rewarded by a senior post, albeit scarcely justified by his years, and on 25 February 1854, he became Surgeon-in-Charge and Superintendent of the Civil Hospital at Smyrna. That post occupied him for 15 months; afterwards, he travelled to the Crimea and was given the honorary rank of major. In 1856 he went home via Palestine, Egypt and Paris. So, by the age of 28, in only three exciting years, he had acquired vast experience which was encapsulated in a book of 400 pages.<sup>12</sup> With such a record, subsequent promotion was guaranteed. However, optimism ruled when, at the age of 32, he applied with five others from Glasgow and two from Edinburgh (including Lister) for the Regius Chair of Surgery in Glasgow, vacated by the death of Lawrie.<sup>13</sup> The arguments and discussions which preceded the appointment of Lister are described elsewhere.<sup>14</sup> His ambition was fulfilled nine years later when he succeeded Lister in the Chair and became surgeon in the Royal Infirmary and, later, senior surgeon in the new Western.

His date of graduation meant that he was taught the 'old' surgery but, on assuming the Chair, he sought by every means in his power to inculcate the principles of the infant science of antiseptic surgery as pronounced by his illustrious predecessor, and this at a time when some senior surgeons in Glasgow and elsewhere were sceptical of the revolutionary doctrine.<sup>15</sup> A lifelong dedicated teacher, he had the means, by virtue of his influence on large undergraduate classes (100–200 students), to extend the boundaries of the 'new' surgery into the future. He taught general principles but showed little interest in pathology or clinical research. Freeland Fergus said 'he had little scientific bent and the surgery he taught towards the end of his career was by no means up-to-date on the scientific side'.<sup>16</sup>

Macleod received many honours. Surgeon-in-Ordinary to the Queen in Scotland, he was knighted in 1887. He

died in 1892 and three years later Lady Macleod (daughter of the family of Houldsworth of Belvidere) donated a medal for the most distinguished student in surgery in the final examination.

#### **George Buchanan (1827–1906)**

Buchanan was a colleague of Lister in the Royal Infirmary throughout the latter's entire time in Glasgow. His father, Dr Moses Buchanan, an anatomist and surgeon, encouraged him to follow the same path. Moses was very successful as a teacher of anatomy and largely responsible for the popularity of the extra-academical school in South Portland Street. Nourished by his father's teaching, an intimate knowledge of anatomy made George a bold and skilful operator.

Graduating from the University of St Andrews in 1849, he served in the Crimea like his future colleague in the Western Infirmary, G.H.B. Macleod and, like him, wrote of his experiences in a two volume manuscript diary *Turkey and the Crimea in 1855*, gifted by his family to the Royal College of Physicians and Surgeons.<sup>17</sup> Again, like Macleod, he was an unsuccessful applicant for the Regius Chair of Surgery in 1860. This was the year of his father's death, so as one door closed another opened; he succeeded to the Chair of Anatomy in Anderson's College which had been held by Moses. Almost immediately he was appointed to the surgical staff of the Royal Infirmary, a post he held until 1874 when he was elected the first Professor of Clinical Surgery in the University based at the Western Infirmary.

Graduating soon after the discovery of chloroform, Buchanan volunteered to test the anaesthetic on himself; the experiment involved a small incision made by his father under a fingernail.<sup>18</sup> Although his bent was teaching rather than research, he carried out pioneer work on facial surgery and was probably the first to point out the possibility and safety of removing half the tongue. He was also given the credit of being the first to perform an ovariectomy successfully in Glasgow.

A man of small stature, he needed the help of a five inch section of a tree-trunk at operations. It continued in use as an operating stool for many years and was known as George Buchanan's cheese.<sup>19</sup> After 36 years' service in the Western Infirmary, he retired due to ill health in 1900 and died six years later. His successor was (Sir) Hector Cameron, then current President of the Faculty of Physicians and Surgeons (1897–1900), who was appointed without advertisement.

#### **Thomas McCall Anderson (1836–1908)**

McCall Anderson was the grandnephew of John Anderson, Professor of Natural Philosophy in the University (1757–96) and founder, by an article in his Will of Anderson's 'University', progenitor of the University of Strathclyde.<sup>20</sup> The family connection was revived when the young

physician (MD 1858) became lecturer in medicine in that institution in 1866. Appointed a physician in the Royal Infirmary in 1870, the recently qualified William Macewen was one of his house physicians.<sup>21</sup> He was the first occupant of the Chair of Clinical Medicine in the University (1874), a post held until he followed Gairdner in the Regius Chair in 1900. He died suddenly on the steps of the St Enoch Hotel after the Burns Supper held by the Glasgow Ayrshire Society on 25 January 1908.

His reputation as a teacher ensured large numbers of students in his clinics. Teaching, rather than clinical research, was his strength. He did not use bedside instruction to any great extent or favour ward visits; the size of his classes made such methods impractical. Reliance was placed on superbly organised clinical demonstrations.

Very popular as a private consultant, he was criticised by some colleagues for a too superficial approach to difficult cases and diagnosing by instinct rather than reason. His special interest was diseases of the skin and he was one of two medical men who, with others, founded the Hospital for Skin Disease which opened an out-patient dispensary in Elmbank Street in 1861. A subsequent arrangement gave him two wards of 12 and eight beds for skin diseases in the Western Infirmary in addition to his medical beds. His reputation at home and abroad, through his publications, rested more on his work in dermatology than clinical medicine; his *Treatise on Diseases of the Skin* (1887) was well known.

An appointment (1897–1901) which gave him great pleasure was Examiner in Medicine and Pathology for the British and Indian Army Medical Services. He was the first physician outside London to hold this post. An immediate effect was the greater interest of Glasgow graduates in entry to the Imperial medical services.<sup>22</sup>

His many honours included knighthood (1905) and Honorary Physician to the King (1907). His eldest of five daughters served as a nurse with the Army in South Africa and later was Matron of St George's Hospital, London. A younger brother, Major A.D. Anderson, was killed in Afghanistan in 1878 when serving with the Bengal Army.<sup>23</sup>

#### **Pearce A. Simpson (1837–1900)**

Born in Ireland, Simpson was educated at Edinburgh, St Andrews and Cambridge Universities, graduating MD (St Andrews, 1861) and MA with mathematical honours at Cambridge a year later.<sup>24</sup> This peripatetic student career was followed by a return to Scotland and appointment as lecturer in medical jurisprudence in Anderson's College before succeeding H. Rainy in the University Chair of Forensic Medicine in 1872.

His subject was diffuse and, until the Meehan Chair of

Public Health was founded in 1923, included principles of hygiene. It had also, as now, a foot in the faculty of law with forensic medicine an examination subject for the LLB and BL degrees. As recently as 1952, this stipulation remained unpopular with the lawyers who considered that forensic medicine was not a legal topic and unworthy of inclusion in the law faculty curriculum.<sup>25</sup>

Simpson's career was dogged by illness but a notable achievement was the establishment, on his initiative, of postgraduate teaching in public health.

In 1898, this poor health forced his retiral and he died two years later at Lochwinnoch. Although he was a former editor, the *Glasgow Medical Journal* did not publish an obituary, or even a death announcement. He was succeeded by John Glaister Senior.

### **John Gray McKendrick (1841–1926)**

A native and graduate of Aberdeen (MD 1864), after some years in general practice he joined the department of Hughes Bennett, Professor of Physiology in Edinburgh, in 1869, and soon won a great reputation as a teacher. From 1872, he was a lecturer in the Institutes of Medicine of the extra-mural school in Edinburgh.

At this time, the equivalent department in the University of Glasgow, under the aged and long-serving Professor Andrew Buchanan, lacked leadership and direction. Originally his subjects included pathology, hygiene and therapeutics, but predominately physiology.<sup>26</sup> Only physiology and pathology survived his years in the Chair. Under pressure from the students, who complained that lectures were incomprehensible due to lack of voice, the Court requested Buchanan's resignation. After a long correspondence with the Principal, he retired with reluctance in 1876 at the age of 78 years.

On accepting the Chair, McKendrick was critical of the poor facilities he had inherited, but when Buchanan died in 1882 wrote a generous tribute to a man of substance in his time.<sup>27</sup>

Under the new order, pathology was hived off and with a new name – physiology – the ailing department prospered and the modern era of physiology in the University was born.

Trained as a physiologist, McKendrick devoted his entire time to academic duties. During his incumbency of 30 years the reputation of the department for both teaching and research was of the highest.

The development and planning of the new facilities in the West Medical Building owed much to his vision and energy, but construction was not completed until 1907, a year after his retiral. The cost was £57,259, of which £20,000 was contributed by the Carnegie Trust, a like

sum from Principal Story's Equipment Fund and the rest by public subscription.<sup>28</sup>

McKendrick's main research interests lay in the peripheral nervous system and the special senses; his numerous publications on these topics elevated the status and reputation of the Glasgow School. He was in the forefront of the use of graphic methods in recording physiological observations, and such were used to demonstrate the links between nerve and muscle. Another of his pioneering projects was the bracketing of chemical constitution with physiological action, and this had an important bearing on the development of pharmacology, but perhaps his most telling contributions were in the field of the special senses. His observation that light produced electrical changes in the retina was seminal. Interested also in music, he explained and illustrated Helmholtz's work on the theory of musical and vocal tones and wrote papers on physiological acoustics and experimental phonetics.

McKendrick was a valued and popular lecturer with a gift for clarity and aptness of illustration. This gained him honours as lecturer to various societies including the Royal Institution and the British Association. Many books and papers came from his pen, including his *Text-book of Physiology* (1888) and contributions to the *Transactions* and *Proceedings* of the Royal Societies of London and Edinburgh.

Among other achievements, he laid the ground work for the department of psychology; the first lecturer, Henry J. Watt M.A.D. Phil. was appointed in 1908. Honours included FRS (London and Edinburgh) and LLD (Glasgow and Aberdeen). McKendrick was one of 19 physiologists who met in London in 1876 to form the Physiological Society.<sup>29</sup> After retiral, he moved to Stonehaven and was Provost in 1910.

### **John Cleland (1835–1925)**

Cleland was one of the most famous anatomists of the second half of the nineteenth century and an outstanding figure in medico-scientific circles in Scotland. A native of Perth and graduate of Edinburgh (MD 1856), after a few years as assistant in the anatomy department there, he became senior demonstrator under Professor Allen Thomson in Glasgow. In 1863 he took a post as clinical lecturer and Professor of Anatomy and Physiology at Queen's College, Galway. During 14 years in Ireland he wrote many papers and edited jointly *Quains Anatomy* (1867), while also acting as surgeon at the local hospital. Remarkably for one so young, working in such an isolated place with little help or stimulation from others, he was elected FRS in 1872. It is little wonder that he was invited to Glasgow to succeed Allen Thomson in 1877. With him, the strong wind of Darwinism came to Glasgow.<sup>30</sup>

His paramount interest was comparative anatomy. Great regard for the work of Darwin was balanced by fear of

the materialism which, he believed, would flourish if the theory of natural selection as the principle law of evolution was accepted in its entirety. At that time, among prominent scientific men he stood almost alone as an 'expositor of the spiritualistic conception of life'.<sup>31</sup> His philosophy was a curious blend of eighteenth- and nineteenth-century beliefs – a compromise between his scientific training and a deep-seated Scottish Presbyterian and covenanter background.

He was a great personality in the University with a commanding physique and the 'head of a Roman Emperor'. His teaching was propounded as vigorously as pursued research. While Allen Thomson's main interest was embryology, Cleland tended more towards histology. His textbook *Human Anatomy*, written with J. Yule Mackay, an assistant in his department and later Principal of University College, Dundee, was very popular and contained a record of many original observations.

Throughout his 32 years in the Chair he reorganised and enriched the vast anatomical museum which was bequeathed to the University.

Away from scientific work, he had a broad artistic flair and was no mean poet and painter. Under the title Johannes Cleland, he was involved in the production of *The Scottish Students' Song Book*.

The University was surprised and disappointed when he decided to retire in 1909; still in good health, he desired rest. Except for Ferguson of Chemistry, he was the senior professor in the faculty. At the behest of the General Council, his portrait was painted by Sir George Reid, R.S.A., a near neighbour in Somerset.

#### **Matthew Charteris (1840–1897)**

Charteris held the Chair of Materia Medica for 17 years until his death; he was succeeded by Ralph Stockman. An Edinburgh graduate (MD 1863), he was a diligent student of classics. After travel in Europe and practice in London and Airdrie, he settled in Glasgow and quickly came to prominence as a physician in the Royal Infirmary (1874–83) and Professor of Medicine in Anderson's College (1876–80). His *Practice of Medicine* ran to seven editions. Research pursuits included remedies for sea sickness, the effect of climate on the treatment of disease and a survey of health resorts at home and abroad.<sup>32</sup> A prolonged illness interrupted his career and impeded the continuity of his work.

Charteris had three sons, one of whom was just completing the medical course when his father died. This son, F.J. Charteris, was appointed lecturer in Materia Medica, with special reference to pharmacy, in the University in 1912, after many years as an assistant. In 1919 he became Professor of Materia Medica at St Andrews. Miss Marion Gilchrist, for whose murder at

49 West Princes Street, Glasgow in 1908 Oscar Slater was wrongly convicted, was his aunt. Dr Charteris was alleged to have been at the scene of the crime with a cousin, but neither was charged.<sup>33</sup>

Another son, A.H. Charteris (MA 1894, LLB 1898), served the University for many years as lecturer in international law. A brother of Matthew Charteris was the distinguished Professor of Biblical Criticism and Biblical Antiquities at the University of Edinburgh.

#### **POSTSCRIPT**

This account of affairs in the faculty of medicine in the two decades after Lister does not include major milestones in the history of University medicine which are widely chronicled and celebrated elsewhere e.g. the early life of the Western Infirmary, the endowment of Queen Margaret College and the admission of women to the faculty. We have tried to bring to the fore events and historical details which are less well-known and yet significant and substantial, if on a smaller scale.

#### **ACKNOWLEDGEMENTS**

We are indebted to the Senate and Court of the University of Glasgow for allowing us to peruse their minutes and publish therefrom. Professor A. C. Kennedy read the script and offered constructive criticism. Mrs Topen, archivist of Yorkhill Hospital, supplied information and the secretarial work was in the hands of Mrs K. Atkinson. It is our pleasure to record our thanks.

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