J R Coll Physicians Edinb 2014; 44:258–9
http://dx.doi.org/10.4997/JRCPE.2014.317

Archibald Pitcairne (1652–1713)

Archibald Pitcairne was arguably the most brilliant of the original 21 founder members of the College. A polymath with a Europe wide reputation, he held the chair of medicine in Leiden, a link that would lead to the founding of the Edinburgh Medical School. Yet on his return to Edinburgh, a quarrel with his physician colleagues saw him ousted from the College and join the Edinburgh surgeons. The two Edinburgh medical Royal Colleges in 1952 jointly commemorated the tercentenary of his birth by placing a plaque on his restored tomb in Greyfriars Churchyard.

Pitcairne was born in Edinburgh in 1652, the son of a merchant. He studied initially at the 'Tounis College' (as the University of Edinburgh was then known), graduating MA in 1671. His studies had included divinity and law, which he went on to study in Paris where he developed an interest in medicine. After studying at Padua, he graduated MD from Reims before returning to Edinburgh and medical practice, and became one of the original Fellows of the newly founded Royal College of Physicians of Edinburgh.

By contemporary accounts an able physician, he also had a particular aptitude for mathematics. This he shared with his closest friend, the precocious mathematician David Gregory (1659–1708), a first cousin of James Gregory (1674–1733), professor of medicine in Aberdeen and progenitor of the Gregory medical dynasty. David Gregory became Professor of Mathematics at Edinburgh University and, thereafter, Professor of Astronomy at Oxford. They jointly wrote mathematical papers and this background led to Pitcairne championing what became known as the iatromechanical theory of physiology. This hypothesis was based on the assumption that bodily functions, such as the circulation, were determined by mechanical factors and could better be explained by Newtonian physics rather than the imbalance of humours. Pitcairne's enthusiasm for this theory led to him publishing *Solutio problematis de historicis; seu inventoribus*, a monograph supporting the claim that Harvey, rather than the ancient Greeks, had discovered the circulation of the blood. This publication was largely responsible for Pitcairne being appointed (jointly with Robert Sibbald and James Halket) Professor of Medicine at the University of Edinburgh. In this position he became one of the more eminent protagonists of iatromechanical theory and, in 1691, he was invited to the prestigious Chair of the Practice of Medicine in the University of Leiden. On the journey there, he visited Sir Isaac Newton at Cambridge.

FIGURE 1 Archibald Pitcairne
Line drawing by Rob Stranae after Sir John de Medina (RCPE Library)

His pupils at Leiden included several who were later to achieve fame in their own right, including Richard Mead, the Edinburgh surgeons John Monro and Robert Elliot, and probably Hermann Boerhaave himself.

His stay at Leiden was short because his future wife Elizabeth Stevensone did not wish to settle there. On returning to Edinburgh he became embroiled in the ongoing controversy over fever treatment. Andrew Brown, a follower of Sydenham, had advocated a new method of treating continual fevers (bloodletting, purging and a paregoric like laudanum), a view not shared by the traditionalist Edinburgh physicians of the day, whose treatment was based on emetics and particularly diaphoretics. The fact that Brown was an outsider, an empiricist and a Whig, further heightened opposition within the College. As College Censor, Pitcairne's role was to defend the College line against such medical heresy. But his Newtonian view in *Dissertatio de curatione febrium*, that purgatives and bloodletting formed part of febrile treatment because of their mechanical effects, was viewed with outrage by some colleagues. By remaining a devoted Episcopalian and Jacobite, at a time of great friction between them and the Presbyterian establishment, and by his outspoken and scathing criticism of all things Presbyterian, he made more

enemies. A fight between rival factions, one around Pitcairne, the other around Sir Robert Sibbald, fuelled the 'riot in the College'. After this, Pitcairne was excluded from the College, along with others including his father-in-law, Sir Archibald Stevensone, the first president of the College.

In 1701 he was admitted to the Incorporation of Surgeons where he promoted the study and teaching of anatomy. He provided the summing-up at the first two successful public demonstrations of anatomical dissection performed in the 'new' Surgeons Hall. Pitcairne was the most distinguished member of the Incorporation at that time and his influence led to the appointment of Robert Elliot, the Incorporation's 'public dissector of anatomie', and one of his Leiden pupils. Elliot became the first professor of anatomy at the University of Edinburgh, the first such chair in Britain. Another pupil, John Monro, inspired by his Leiden experience, played a leading role in the establishment of the Edinburgh Medical School, designed in the image of Leiden.

After his death in 1713, Pitcairne's large library was purchased for the Czar of Russia by Robert Erskine, a Scottish physician, who was also the Czar's chief librarian, and who had known Pitcairne in Edinburgh.

Pitcairne was one of the most scholarly doctors of his day, yet iatromechanical theory essentially died with him. His greatest legacies were his influence on some outstanding pupils and providing the most important early link between Leiden and Edinburgh, a link crucial in the establishment of the University of Edinburgh Medical School.

I Macintyre

Further reading

1 Craig WS. *History of the Royal College of Physicians of Edinburgh*. Oxford: Blackwell; 1976.

2 Guerrini A. Archibald Pitcairne and Newtonian medicine. *Medical History* 1987; 31: 70–83. http://dx.doi.org/10.1017/S0025727300046329

3 McCrae M. Physicians and Society: *A History of the Royal College of Physicians of Edinburgh*. Edinburgh: John Donald; 2007.

4 Cunningham A. Sydenham versus Newton: the Edinburgh fever dispute of the 1690s between Andrew Brown and Archibald Pitcairne. *Medical History* 1981; 25: 71–98. http://dx.doi.org/10.1017/S002572730007006X