Born near Dunkeld, Scotland, in 1876, John James Rickard Macleod moved to Aberdeen as a young child and attended Aberdeen Grammar School. He was a prize-winning medical graduate of the University of Aberdeen’s 1898 class who went on to pursue a postgraduate career in laboratory physiology. In summarising Macleod’s biography, we draw on the excellent 1993 publication ‘J.J.R. Macleod: The Co-discoverer of Insulin’ by Michael Williams (5), an Aberdeen alumnus who led diabetes services there for the decade prior to his retirement in 1994. After graduation, Macleod moved immediately to a prestigious scholarship in Leipzig to study physiological chemistry and quickly published the first of his many papers - on the phosphorus content of muscle - the following year (1899). After a further year of research in Aberdeen, he moved to the London (UK) Hospital Medical College, initially as a demonstrator in physiology, before becoming Lecturer in Biochemistry and Pathological Chemistry to the London Hospital. In 1902 he collaborated on a book entitled ‘Practical Physiology’ with colleagues, contributing the entire section on physiological chemistry. His talents were noticed and he was invited to apply for the Chair of Physiology at Western Reserve University, Cleveland, Ohio.

Macleod took up this senior post in 1903, around the time of his 27th birthday. He contributed three chapters to ‘Recent Advances in Physiology and Biochemistry’ published in 1906, including one on carbohydrate metabolism. Perhaps as a result of this work, his research output became increasingly focused on carbohydrates including estimation of blood glucose and liver glycogen as well as experimental diabetes in pancreatectomised dogs. In 1913 he published a monograph entitled ‘Diabetes: Its Pathological Physiology’ and in 1918 ‘Physiology and Biochemistry in Modern Medicine.’ Following two winter sabbaticals as Chair of Physiology at McGill in Montreal, he was appointed to the Chair of Physiology at the University of Toronto in 1918. He had major involvement in the reorganisation of teaching in this progressive medical school and developed research into respiratory function and acidosis while continuing to publish on carbohydrates and diabetes. It is thus beyond question that by 1920 when Banting wrote down his nocturnal idea, Macleod was an academic physiologist of great distinction and international repute with a history of substantial research and publication in carbohydrate metabolism.