Page 5 Figures – Draft Tiered Captions

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| **Pic** | **Minimal** | **Modest** | **Extended** |
| 5:1 | JJRM to AAP | The first scientific presentation on insulin, May 1922. | This is the title and authors of a presentation made by Professor Macleod to the American Association of Physicians held in Washington. This presentation, made on 3rd May 1922 (exactly 50 weeks after Banting had started working on pancreatic extracts in Macleod’s laboratory) was effectively the first official scientific announcement of the effective new treatment for diabetes developed in Toronto. Macleod delivered the paper; he was the only member of the Toronto team who attended the meeting. The paper described the various stages of the research, giving due credit to the work of all contributors, and included reports of the spectacular improvements in the early cases of diabetes treated. Highly respected authorities in the audience declared that the Toronto group had produced evidence that they had, indeed, isolated a pancreatic extract - henceforth known as insulin – which would herald a new era in diabetes research and treatment; the audience gave a standing ovation. |
| 5:1a | 1st Uk paper | The first paper on insulin published in the UK, Nov 1922. | This is a picture of the front page of the first article on insulin published in the United Kingdom. In late September 1922, the British Medical Research Council had sent Henry Dale, Head of Biochemistry & Pharmacology in its National Institute for Medical Research to visit Macleod’s Department. Dale and a colleague were able to assess at first hand this acclaimed new treatment for diabetes and to find out about the issues surrounding its large scale production. Dale returned from Toronto with Macleod’s manuscript on Insulin and Diabetes at the end of October and the subject was considered of sufficiently great importance to be published in the British Medical Journal the following week. Dale’s enthusiasm for insulin following his visit to Toronto also led to the BMRC accepting the University of Toronto’s offer of the patent for insulin production in the UK as arranged by Macleod. |
| 5:2 | Nobel citation | The 1923 Nobel citation. | This document records the joint award of the 1923 Nobel Prize for Medicine or Physiology to Macleod and Banting. It was unusual for research conducted so recently to attract this accolade – but the discovery of clinically useful insulin was quickly hailed as one of the greatest medical breakthroughs. There was much controversy at the time and afterwards about just (and unjust) rewards. Banting was so incensed at Macleod’s award that he almost refused the prize; he decided to share the prize money with Best. Macleod shared his prize money with Collip. Of the Toronto team, only Banting and Macleod had been nominated for the award. Futhermore, while the Nobel rules allowed awards to be shared, this could be by a maximum of three people. Banting’s enduring bitterness related to the fact that he never really understood the relatively modest contribution he personally made to the overall process of the discovery of insulin. In his authoritative book on the subject, Professor Bliss suggests that all four of the ‘main players’ deserve a share of the credit and that it is unlikely that useful insulin would have been discovered in that place and at that time without the contributions of each of them. |
| 5:2a | Nobel medal (obv) | Macleod’s Nobel medal | This photograph of the obverse (‘heads’) side of Macleod’s gold medal features the image of Alfred Nobel (1833-96) a Swedish inventor, chemist, engineer, arms manufacturer, businessman and philanthropist who is said to have made much of his fortune from his invention of dynamite. Not wishing to be remembered as one who was so prominent in supply of guns and military explosives, he bequeathed considerable sums of money for a series of annual Nobel prizes in physics, chemistry, medicine or physiology, literature and services to international fraternity (the Nobel Peace prize). Nobel prizes were initially awarded in 1901. |
| 5:2b | Nobel medal (rev) | Macleod’s Nobel medal (reverse) | This photograph shows the reverse (‘tails’) side of Macleod’s Nobel gold medal. The image is of the image shows a character known as ‘the Genius of medicine’ with a book in her lap collecting water pouring from a rock to quench a sick girl’s thirst. This depiction is particularly poignant in relation to insulin since its discovery has saved the lives of those who would be suffering from extreme thirst as a main feature of diabetes. The Latin inscription, adapted from Virgil’s Aeneid, translates to: ‘It is beneficial to have improved life through discovered arts’. The name of the recipient and year of award are also shown. Macleod bequeathed this medal to the University of Aberdeen. |
| 5:3 | Macleod 1928 | JJR Macleod circa 1928 | This is a portrait photograph of Professor JJR Macleod from about the time that he returned to the University of Aberdeen in 1928 to the post of Regius Professor of Physiology based at Marischal College. |
| 5:4 | JAMacWilliam | Professor JA MacWilliam | Professor John Alexander MacWilliam (1857-1937), a farmer’s son from Kiltarlity near Inverness, graduated in Medicine at the University of Aberdeen in 1880. He worked successively in posts in Edinburgh, London and then on cardiac physiology reseach studies in Leipzig. He returned to Aberdeen to write his MD thesis on heart muscle, graduating with highest honours in 1882. After 4 more years research at university College Hospital, London, he was appointed Regius Professor at the Institutes of Medicine in the University of Aberdeen when aged only 29. His researches into cardiac physiology are regarded as being ahead of their time – implying such things as cardiac arrhythmia as a cause of sudden death, cardiopulmonary resuscitation, electric shock therapy as a means of correcting rhythm disorders and cardiac pacing for slow heartbeat; all of these were applied to clinical management of cardiac cases decades after he described them.  On taking up post in Aberdeen he continued research into the heart, blood pressure and blood vessels and became increasingly involved in teaching. JJR Macleod was one of his most successful students whose career in academic physiology – including his early scholarship studies in Leipzig – are likely to have been influenced by MacWilliam’s mentorship. It is also quite likely that MacWilliam would have encourage the appointment of Macleod as his successor as professor of Physiology in Aberdeen when he retired at the age of 70. |
| 5:5 | P&J UoA chair | Press and Journal, April 1928. | This image shows an article cut out of the Press and Journal on 13th April, 1928 and held in the Aberdeen Central Library archives. The article shows a number of things, not least the perceived importance of a senior university appointment in the city. It gives a fairly comprehensive history of Macleod’s background and achievements and quite clearly describes Macleod’s involvement in the discovery of insulin and resulting award of a Nobel prize (only 5 years earlier). The existence of this comprehensive article shows that news of Macleod’s international fame was out there – in the main city newspaper – at the time of his return to Aberdeen. One can only wonder at how he has failed to become a widely recognised and well-remembered academic celebrity in the city where he grew up, was educated and eventually held a prestigious university appointment. |