June 2025

Hilltop Cloud

Time Travellers Club

Dear Club Members,

One hundred and ten years ago Lucy Wills enrolled at London (Royal Free Hospital) School of Medicine for Women, the first school in Britain to train female doctors. She qualified five years later in 1920. The school was founded in 1874 by an association of pioneering women physicians Sophia Jex-Blake, Elizabeth Garrett Anderson, Emily Blackwell and Elizabeth Blackwell. The name Garrett Anderson may be familiar from last months fibre, Elizabeth was the mother of Louisa Garrett Anderson.

On qualifying Wills carried out research and taught in the department of Pregnant Pathology at the Royal Free, after 8 years she left for India, where she began the research for which she is most famous. Macrocytic Anaemia in pregnancy is a condition where the red blood cells are larger than normal, the change in ratio between the surface area and volume of the cells decreases their ability to carry oxygen. It was highly prevalent in poorer women who worked in the textile trade in India, and Wills was invited by Dr Margaret Balfour of the Indian Medical Service to join their Maternal Mortality Inquiry.

Pernicious Anaemia was well studied, but the women who presented with anaemia in pregnancy didn't respond to the standard cure, that of Vitamin B12. When Wills fed rats the same diet as the poorer women who developed anaemia the rats also became anaemic, but she found that the anaemia could be cured or prevented by adding yeast to their diet. The cheapest and easiest way of doing this was by using the yeast extract, Marmite. The new form of B vitamin in yeast extract was known at the time as the Wills Factor, but we now call it Folic Acid. It not only prevents anaemia, but also helps foetal brain development preventing birth defects like spina bifida.

In 1938 Mills returned to the Royal Free Hospital in London, until her retirement in 1947, during World War II she worked as a pathologist for the Emergency Medical Service., by the end of the war she was in charge of Pathology for the whole hospital, and had established the haematology department.

After her retirement, Wills travelled extensively, including to Jamaica, Fiji and South Africa, continuing her observations on nutrition and anaemia. In Fiji she, along with New Zealander Dr. Muriel Bell, was responsible for carrying out the first multi-ethnic nutritional survey of women and children in Fiji. They studied the source of anaemias, protein and vitamin deficiencies there. Their work was based on some flawed assumptions about the causes of these issues, while at the same time their recommendations were responsible for the introduction of free iron tablets for anaemic pregnant women and attempts to provide infants and children with increased protein intake through feeding programmes at schools and health centres.

She never married, but had a number of close lifelong friendships, including with Margot Hume who she studied with at Newnham College Cambridge as an undergraduate, they jointly owned a cottage in Surrey whose botanical garden they cultivated. Hume also studied nutrition, and her research contributed to the proof that rickets was caused by dietary deficiencies rather than being caused by microbes. She was also friends with and with Kait Lucan (the Dowager Countess of Lucan, mother of John Bingham, 7th Earl of Lucan, the disappearing earl), who was a fellow Labour Councillor in Chelsea.

She died on 26 April 1964 aged 75. Obituaries and other publications describe her as independent, autocratic, not a sufferer of fools, a joyous and enthusiastic teacher, an indomitable walker and skier, an enthusiastic traveller, a lover of the beauty of nature, mirthful and entertaining.

Her obituary in the British Medical Journal the following month included the following comments:

The excellence of her work on tropical megaloblastic anaemia has long been recognised by nutritionists and haematologists. Every medical student has heard of its cure by her discovery of the Wills factor in yeast extract, which paved the way for the subsequent work on folic acid. It was one of the simple but great observations which are landmarks in the history and treatment of the nutritional anaemias. Lucy Wills even in her seventies was always a tireless worker, and seeing her example other people found themselves working harder than they had believed possible. Though impatient with laziness and with half-baked opinions, she was compassionate to other human failings. She held strong convictions on social questions, and steadily upheld them as a borough councillor in Chelsea during the last decade of her life. She had wide interests, particularly loving books, gardens, music, and the theatre, and enjoying life always with keen intelligence and humour. Her generosity and magnanimity, combined with outstanding ability and resolution, made friends of all who ever worked with her and found her worthy of profound respect and deep affection.

Your fibre this month used Peduncle and Eri Silk, both silks that come from India, and of course has to have a bit of brown in it for that love it or hate it Marmite!

Happy Spinning

Katie

Fibre Content- In case your parcel is missing the label
74% Merino
13% Eri Silk
13% Peduncle Silk

Further Reading-

Lucy Wills
https://scientificwomen.net/women/wills-lucy-138
https://www.newscientist.com/article/2202465-how-lucy-wills-discovered-a-medical-marvel-in-marmite/
https://www.youtube.com/watch?v=64h7PmvNiec

Margot Hume
https://en.wikipedia.org/wiki/Margaret_Hume