













Elizabeth Minasian (left) and Agnes Henschen (right) preparing an amino acid analyser, ca. 1967.

[Reproduced with permission of St Vincent's Institute of Medical Research]

in his being unable to appreciate a joke: he took everything seriously. He seemed to exude this scientific seriousness always and everywhere, but in fact it was only a shell protecting his real self. He believed that it would not be suitable for a scientist to be cheerful, except on very special occasions.

It was also rare for him to praise anyone's work. He assumed a person would be further urged on to work harder next time, if he were not praised for his previous work. I remember him once coming to me just before he was leaving work and with a smile on his face, congratulated me on the precise manual degradation and identification of the sequence of the five steps which I performed on several normal and abnormal immunoglobulins. He checked all my results with the automated Sequenator and they were identical. The congratulation was directed to the skill which I developed myself, in being able to start the new cycle of the protein in dissolving the insoluble PTC in the coupling buffer. He likened my accomplishment to that of a witch, which I did not quite appreciate at the time. However, I think he meant it as praise!

Another time I remember one day when Pehr Edman came to me and asked first thing in the morning "Do you know how to knit?" I said immediately, very surprised, "Yes." Then he said, "Leave all your work aside and knit for me an electrical mantle for the bell jar on the Sequenator so that we can raise the temperature in the cup to 50°C and be able to perform the sequence." I left everything, I went into the city and bought a pair of gloves, white glass wool and a pair of needles. It was quite strange to sit in the lab and knit the bell jar pattern with a little hole in one side to enable observation of the reaction inside. The electric wire was inserted between the two knitted layers and it was used in the Sequenator until it was replaced by chemicothermo reaction by spraying the bell jar with stannic chloride.

On another occasion, I remember the difficulty that I

encountered when developing and doing thin layer chromatography. Instead of round PTH spots I was getting a boomerang type shape. I was worried at the time with these results and I went to Pehr Edman asking him how to solve this problem. He laughed and turning to me said, "What are you expecting? We are in Australia and it is legitimate to have the boomerangs; try to solve this problem yourself." It was a difficult task, because this kind of shape was not always seen on the chromatograms and the reason was hard to guess. But eventually after hard work and perseverance, I found out the Camag Kieselgel F254 was not uniformly ground. Contacting Camag factory in Switzerland, this mechanical problem was solved and from then on it did not happen again.

As a scientist, Pehr Edman was characterised by faithful perseverance in pursuing an established goal through years of work. The development of the Sequenator took approximately four to five years. When it was completed, I remember that one day around the table at our usual team time, he asked us what we thought the name of the new machine which would revolutionise the protein chemistry field should be. Names came out and finally I remember that we decided to choose between three names: Matilda (popular song and proposed Australian anthem), Sequana or Sequenator. After a few days, he told us that he thought that the most adequate name would be Sequenator, to describe the work it performs.

As a human being, he was a very sensitive and quiet man. He was a very lonely person, but endeavoured to hide it. His life was enlightened when he got remarried to the charming Agnes née Henschen.

His long hours of loneliness were filled with classical music, books, walks and fishing on the beautiful coastline at Wilson's Promontory or Apollo Bay. I remember going sometimes to these places with one of his three good friends, Professor Trikojus, Dr Radick and Dr J. Hohne.

He wrote a chapter "Sequence Determination" in the book *Protein Sequence Determination*, 1975, in which he described some novel modifications of the establishment of the amino acid sequences of peptides and proteins (see box on Further Reading, in the accompanying article). At his request, all the experimental parts of his chapter were thoroughly repeated in his own laboratory by myself, so that any problem encountered would be solved subject to his standards. Pehr Edman was only to see the fruits of his great achievement in part, but his pupils will receive his heritage and will do the best to further his work in Biochemistry.

*Elizabeth Minasian worked with Professor Pehr Edman for eight years at St Vincent's School of Medical Research and since 1970 with Professor Emeritus Syd J. Leach AO at the Biochemistry Department of Melbourne University.*