

PIONEERS IN RHEUMATOLOGY

Eric Waaler and Harry M Rose

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Following the delineation by Garrod of Rheumatoid Arthritis (RA) as a separate articular disorder, the development of a test to detect rheumatoid factors in the sera of patients with rheumatoid arthritis was the next landmark event in the evolving story of RA. The credit for developing the test goes to the two researchers. Both developed the (Waalser-Rose) test independently, based on an accidental finding. Both were not specifically looking for rheumatoid factors.

Eric Waaler

Eric Waaler was born on 22nd February 1903 in Hamar, Norway. His father Per Waaler was a physician. His mother Fredrikke Amalie, was a musician and so also was Eric Waaler.^{1,2} He was a first violinist in the Bergen Symphony Orchestra.

Waalser completed his secondary education in 1921 at Hamar. In 1927 he graduated with the candidate of Medicine degree from the Royal Frederick University and obtained M.D. degree in 1935 from Oslo University. His doctoral thesis was "studies on the dissociation of the dysentery bacilli".² Waaler was a research fellow at the Royal Fredrick University from 1936 to 1938, of which, he spent one year at the Columbia University in the department of pathology.²

From 1938 to 1940 he was a prosector at Rikshospitalet, Waaler worked at Gade Institute Bergen in 1941 and was appointed Professor of Pathology at the University of Bergen in 1948, a position he held till his retirement in 1977. Additionally Waaler was Dean of the Faculty of Medicine from 1948 to 1951 and a rector from 1954 to 1960. He was a cofounder of the Armauer Hansen

Research Institute at Addis Ababa

Waalser was honoured with the knight First Class of the Order of St Olaf in 1959. He was promoted to commander rank in 1973. He was a member of many professional and academic bodies.

In 1937, at Oslav, Waaler while studying complement fixation observed that sheep erythrocytes agglutinated even in high dilution with one particular serum. The serum was of a patient with severe rheumatoid arthritis. The same phenomenon was present with sera of other RA patients. This finding was published in 1940. However, the paper did not attract attention possibly because waaler was cautious about the (possible) diagnostic value of the phenomenon.³ He had presented the findings in a conference at New York. Interestingly Rose was at the Congress, but did not meet him.¹ In fact, the two never met.¹ Waaler died on 3rd March 1997.

Harry M Rose

Harry M. Rose was born in 1906. As a child he had suffered from polio which resulted in paraplegia. After his graduation he suffered from pulmonary tuberculosis.¹ Rose studied medicine at the Cornell Medical School graduating in 1928 and obtaining M D degree in 1932.¹

Rose was a bacteriologist. He became Chair of the Department of Microbiology and Immunology at Columbia University in 1952. Until that time the department was called Department of bacteriology. Rose had the name changed to microbiology.⁴

Rose was unaware of the work of Waaler. In 1947 during serologic studies of Q fever, Miss Elizabeth Pearce, a technician working in his department tested her own serum in the coated sheep cell test and found that her serum

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agglutinated sheep erythrocytes in high titer. She was a patient of rheumatoid arthritis and had recently recovered from rickettsial fever.³ Rose postulated that this phenomenon might be because of rheumatoid arthritis. He along with Charles A Ragan tested a large number of sera of patients with rheumatoid arthritis and control sera from patients with miscellaneous disorders and found similar phenomenon with many rheumatoid arthritis patient sera and only with a few control sera.³ The two went on to develop with cell agglutination test.

Rose put great emphasis on research. He carried out pioneering studies in virology, mechanisms of action of antibiotics, and contributed to the development of influenza vaccine. He was Editor-in-Chief of Journal of Immunology, a fellow of the American College of Physicians, and American Medical Association, and a member of National Academy of Sciences. Rose was honoured with Gairdner International Award

(an award of distinction from Cornell University) the Gorgas Medal, and Squibb award of Infectious Diseases Society.⁴

Rose retired in 1977, got recertified as diplomate and in internal medicine to practice till 1984. He died in 1986. In his honour, the Harry Rose memorial lecture in Infectious diseases was instituted by his students and the family.⁴

References

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