Profiles in Cardiology

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Robert Hebard Bayley: 1906–1969

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Doctor Robert Hebard Bayley was born in 1907 in Paterson, New Jersey. He received his Bachelor of Science and Doctor of Medicine degrees from Emory University and served his internship and residency training at the University Hospital, Ann Arbor, Michigan. During his four years at Ann Arbor he became a lifelong friend and collaborator of Frank N. Wilson. After four years at Ann Arbor, he was appointed as a Resident Physician at the Leahy Home Tuberculosis Sanitarium in Honolulu, at which time he began his self-training in mathematics. In 1936 he began a productive 8-year period as an instructor in medicine at Louisiana State University, during which time he advanced to Associate Professorship.

In 1944, Dr. Bayley joined the faculty of the University of Oklahoma as Professor of Medicine and Director of the Heart Station. He later served as the George L. Cross Research Professor of Medicine and Director of the Bio-Physics Section of the Department of Medicine.

Although his first published papers concerned "Right Aortic Arch" (1932),¹ "Dynamic Dilatation of the Thoracic Aorta" (1933),² and "Thyroid Crisis" (1934),³ the majority of his large bibliography was devoted to the application of mathematical principles to electrocardiogra-

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Received: March 20, 1991 Accepted: April 1, 1991 phy. His publications produced at Louisiana State Univ sity included "The Significance of the Duration of Q3 y Respect to Coronary Artery Disease,"4 "The Potential F duced by Cardiac Muscle,"5 "Acute, Local, Ventricular chemia, or Impending Infarction, Caused by Dissect Aneurysm,"6 "The Normal Human Ventricular Gradient and "On Certain Applications of Modern Electrocard graphic Theory to the Interpretation of Electrocardiogra Which Indicate Myocardial Disease."8 The latter artic which was published in the American Heart Journal 1943, has become a classic. In 1950 Dr. Bayley wrc "Peri-Infarction Block."9 Some of his articles during t 1950s and 1960s dealt with "The Zero of Potential of th Electric Field Produced by the Heart Beat,"10, 11 "The Pro lem of Adjusting the Wilson Central Terminal to a Zero Potential in the Living Human Subject,"12 "Explorato Lead Systems and 'Zero Potentials.'"13 A number of wri ings concerned "The Electrical Field Produced by the Eu centric Current Dipole in the Nonhomogeneous Conduc tor,"14 and various alterations and problems of nonhome geneity.^{15, 16} He published 16 reports between 1950 an 1969 on these biophysical problems.

Dr. Bayley was a member of the original Researc. Committee of the American Heart Association and wa instrumental in establishing many of its present policies He was one of the first Established Investigators of the American Heart Association. In 1959 he received a citatior for Distinguished Service to Research from that organization. He was an honorary Fellow of the American College of Cardiology and a Founding Member of the Southern Society for Clinical Investigation.

In his obituary, written by two of his associates and friends, L. L. Conrad, M.D., and J. M. Kalbfleisch, M.D.,¹⁷ Dr. Bayley was described as "a person of superb clinical acumen, modesty, enthusiasm, and genius." He was a gifted teacher with an uncanny ability for analysis and synthesis which served as a constant stimulus to his students.



Fig. 1 Robert Hebard Bayley, M.D., 1906-1969.

Ironically, he suffered from the same diseases for which he had strived to bring about better understanding. In his final years he suffered two episodes of myocardial infarction and severe intermittent claudication. Up to his death following vascular surgery on April 11, 1969, Dr. Bayley served as Professor of Medicine at the University of Oklahoma Medical Center and was a cardiologist of international reputation and renown.

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