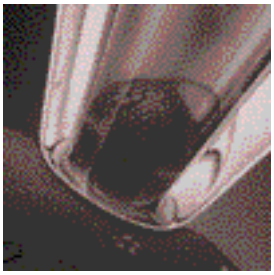

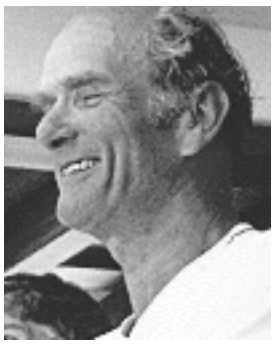

David Colquhoun

Prior to the development of the patch clamp method, ionic currents were recorded as whole cell currents and only the average behavior of a large number of channels could be observed in the experimental record. Following the successful development and application of the patch clamp technique by Neher and Sakmann in 1976, the individual openings and closings of single ion channels were readily observed. It was appreciated that the duration of each opening or closing could reveal long awaited information about the underlying molecular mechanisms that controlled channel gating; however, the experimentally observed durations were random variables. A statistical approach was required to interpret the single channel data and formulate a likely quantitative model describing how the channel functions. David Colquhoun has contributed significantly to both the development of the general theory required to interpret single channel records (together with Alan Hawkes) as well as to our specific understanding of how certain native ion channels, such as the nicotinic acetylcholine receptor, function.

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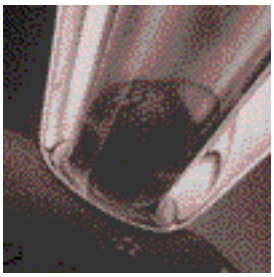

Alan L. Hodgkin	Bertil Hille
Andrew F. Huxley	David Colquhoun
Bernard Katz	Bert Sakmann
Kenneth S. Cole	Erwin Neher
Julius Bernstein	

(From http://www.sfn.org/wrensite/projects/patch_clamp/scholars_2.htm)