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Abstract for Tribute to Ross Adey

Title: Publications of William Ross Adey: the Forgotten Years.

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William Ross Adey (1922-2004) has been honored for his many insightful and groundbreaking experiments and theoretical models in Bioelectromagnetics research (d'Arsonval Medal, 1989). In summaries of his many contributions after his death, great emphasis has been placed on his more-recent review articles that encapsulated his thinking at the time of their publication. This tribute to Ross Adey's work will focus on his early published findings in the late 1960s and 1970s not only because they are the ones that stimulated me to continue to do work in the bioelectromagnetics area, but also because they have potential relevance to some publications that have appeared in the last 8 years.

His early accomplishments were natural outcomes from his training as an MD (1949) with a focus in neuroanatomy and physiology. During the next 25 years, he pioneered the use of computers for spectral analysis of brain waves and techniques for time-series analysis of brain waves, drawing on his lifelong avocation as an amateur radio operator (operator's license, 1939). As director of the Space Biology Laboratory (1961-1974) at the UCLA Brain Research Institute, and later at the Loma Linda VA Hospital and UC Riverside, Ross Adey directed highly productive research teams that contributed seminal papers that helped focus EMF research activities and the evaluation of potential health hazards from such exposures.

The presentation will trace the early reports of electric field influence on reaction time in humans (1968), to similar responses observed in monkeys. This work evolved into observations of EMF-induced EEG pattern changes in the monkeys and subsequently EEG pattern changes in cats. The EEG pattern changes were then correlated with neurotransmitter changes in cats, and led to the use of a ready supply of brain tissue from newly hatched chickens to study biochemical changes elicited by the EMF exposures by 1978. This work, completed over 25 years ago, and the subsequent reports that expanded these finding in different dimensions, has not been noted by most current bioelectromagnetics researchers, especially those studying the influence of mobile phone usage in humans. It is important to emphasize Ross Adey's work again not just to honor him, but to utilize the direct relevance of his research findings to studies currently in progress or being planned.

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