

Pyridine nucleotide redox state parallels production of aldosterone in potassium-stimulated adrenal glomerulosa cells

[NAD(P)H fluorescence/cytosolic Ca^{2+} /rat glomerulosa cells/steroidogenesis]

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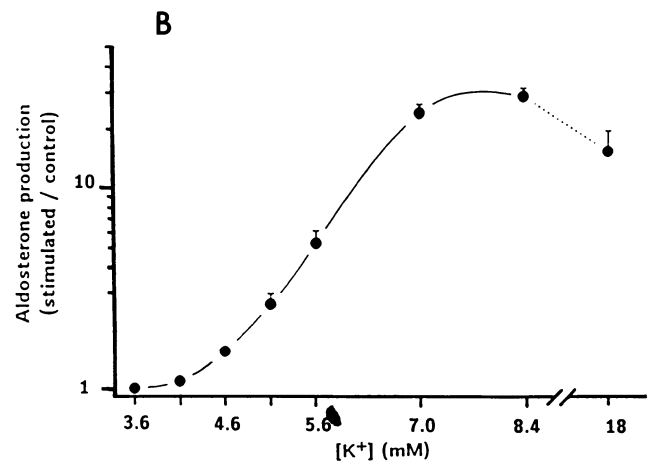
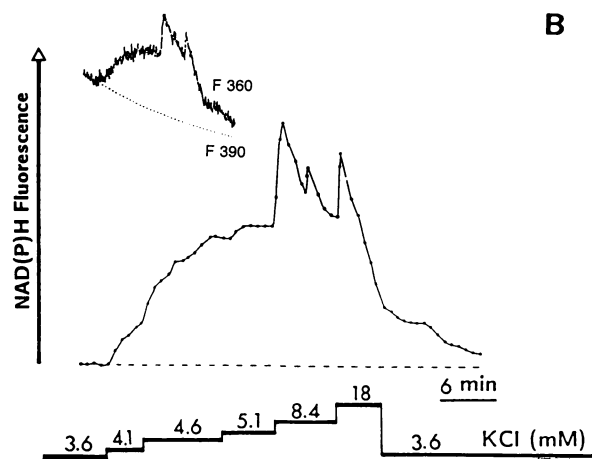
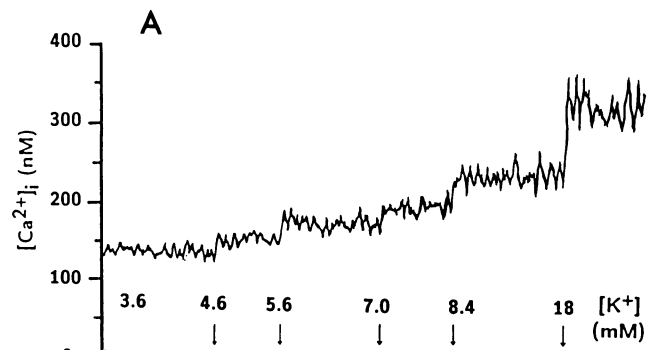
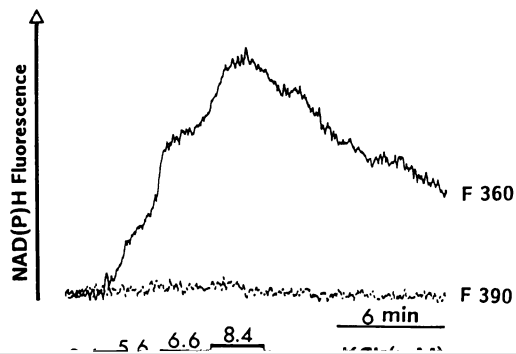


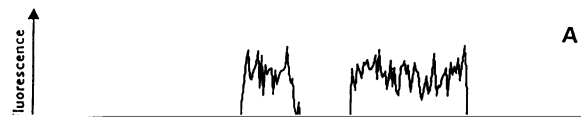
FIG. 1. Fluorescence of reduced pyridine nucleotides.

FIG. 2. $[Ca^{2+}]_i$ (A) and aldosterone production (B) as a function

NAD(P)H, as a function of extracellular K^+ measured in single adrenal glomerulosa cells. The traces are representative of 10 inde-

of extracellular K^+ concentrations in suspensions of rat adrenal glomerulosa cells. The trace in A is representative of four similar

more than twice that obtained with 5.6 mM K^+ . Furthermore, after short K^+ exposure (Fig. 3 A and B), NAD(P)H returned to basal in about 2–3 min. In contrast, prolonged stimulations (more than 5 min) often resulted in recovery times longer than



A

NADPH-to-NADP ratio. This was taken as evidence that the

may also favor steroidogenesis by promoting cholesterol

9. Haning, R., Tait, S. A. S. & Tait, J. F. (1972) *Endocrinology*

transport into the mitochondria (33).

In summary, the amplitude and kinetics of NAD(P)H

87, 1147–1167.

10. Braley, L. M. & Williams, G. H. (1977) *Am. J. Physiol.* 233,