

# Okadaic acid inhibits angiotensin II, adrenocorticotropin and potassium-dependent aldosterone secretion

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The present study was designed to assess the effect of okadaic acid (OA), a protein phosphatase inhibitor, on aldosterone secretion in response to angiotensin II (AII), adrenocorticotropin (ACTH) and rises in external potassium concentration (K<sup>+</sup>). AII (10nM) caused a 20-fold increase in aldosterone production and OA reduced this response by 45%. ACTH (10nM) caused an 8.6-fold increase in aldosterone secretion and OA reduced this by 83%. Increasing K<sup>+</sup> concentration from 3 to 12mM caused a 13-fold increase in aldosterone production, which OA inhibited by 36%. These results suggest that protein phosphatases participate in the control of adrenal steroid production, even though ACTH, AII and K<sup>+</sup> act via different intracellular messenger systems. © 2002 Elsevier Science Ltd. All rights reserved.