

Treatment of oocyte membranes with the 2',3'-dialdehyde of guanosine triphosphate reduces progesterone inhibition of adenylyl cyclase

Olate, Juan

Anker, Roberto

Allende, Jorge E.

Treatment of *Xenopus laevis* membranes with the 2',3'-dialdehyde of GTP (dial GTP) drastically inhibits their adenylyl cyclase activity. Optimal inhibition is obtained by treatment with 1 mM dial GTP for 1h at 32°C. Using guanylyl-5'-yl imidodiphosphate, F-, forskolin and Mn²⁺ as activators of the enzyme it can be concluded that dial GTP preferentially reacts with the stimulatory subunit (Ns) and slightly with the catalytic subunit. Dial GTP treatment greatly reduces the inhibition of adenylyl cyclase by progesterone. Pure exogenous Ns stimulates the enzyme but does not restore progesterone inhibition. Treatment with dial [³²P]GTP labels several membrane proteins some of which have similar Mr to Ns and Ni. © 1985.