

# Oncogenic ras protein induces meiotic maturation of amphibian oocytes in the presence of protein synthesis inhibitors

Allende, Catherine C.

Hinrichs, M. Victoria

Santos, Eugenio

Allende, Jorge E.

Microinjection of the activated ras oncogenic protein can induce the meiotic maturation of *Xenopus laevis* oocytes, a process that can also be triggered by progesterone or high concentrations of insulin. Cycloheximide and puromycin, well-known inhibitors of protein synthesis, block the maturation process induced by progesterone and insulin but do not affect the maturation caused by H-raslys 12 protein microinjection. Theophylline, an inhibitor of cAMP phosphodiesterase that also affects oocyte protein synthesis, does cause a partial inhibition of ras protein-induced maturation. These findings indicate that ras protein acts on the oocyte maturation process at a point that is downstream of the protein synthesis requirement, a characteristic shared with the maturation promoting factor, an activity that appears in oocytes and mitotic cells at the onset of cell division. © 1988.