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**Effects of Don (6-Diazo-5-Oxo-L-Norleucine)
and Azaserine on the Sand-Dollar Embryo**

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DON and azaserine interrupt the development of the sand-dollar embryo at the mid-blastula and early gastrula stages. The minimum dose of DON producing consistent effects is 3 milligram/10 cc of sea-water; azaserine is approximately 1/32 as active. Large doses of DON up to 1 mg./10 cc of sea-water have no appreciable effect on fertilization, cleavage or early development.

Various physiological purines and derivatives will protect against the action of DON and azaserine, even when added up to 12 hours after fertilization. The most active ones are guanine, hypoxanthine and inosine. The protective action of these substances appears to be non-competitive, and they are not effective against large doses of DON and azaserine.

In view of the fact that DON and azaserine, acting as glutamine antagonists, apparently interrupt the *de novo* synthesis of purines, it is suggested that embryonic development in the sand-dollar is blocked at the time when DNA production, initially supplied by endogenous purine precursors, becomes dependent on *de novo* purine synthesis.

This work is reported more fully in Proc. Soc. Exper. Biol. & Med. (in press)

**Glomerular Filtration Rate and Renal Plasma Flow in the
Fresh Water Brown Bullhead or Horned Pout,
*Ameiurus Nebulosus***

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While considerable information is available concerning excretion in marine elasmobranchs and teleosts, little work has been done on renal function (other than osmotic regulation) in fresh water fishes. These studies were undertaken to compare urine flows, glomerular filtration rates and renal plasma flows in *Ameiurus* under standard laboratory conditions which were similar to those previously employed in measuring renal function in marine forms (Forster, 1953, J. Cell. Comp. Physiol. 42:487).

Urine flows and glomerular filtration rates are considerably higher

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