

## Q. Others

### The Uptake of $^3\text{H}$ -thymidine and Relation between Zona Pellucida and Blastocoelic Fluid on Rabbit Blastocysts

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The rabbit blastocysts (6.25 days old, p.c.) were cultured in semisynthetic media (TCM 199+10% calf serum) containing  $^3\text{H}$ -thymidine (0.1  $\mu\text{Ci}/\text{ml}$ ). The following data were obtained from the autoradiographs made by Moog's flat-mount technique after the pulse labeling and chasing under the various conditions, i.g., intact, zona pellucida free and flattened blastocysts.

- (1) The intact blastocysts must be exposed to  $^3\text{H}$ -thymidine for at least 12 minutes before grains appeared in nuclei.
- (2) The blastocysts could utilize the pooled precursor in blastocoelic cavity to synthesize DNA, when they were reincubated for 58

minutes in  $^3\text{H}$ -thymidine-free media after 2 minutes incubation in the hot media. In case of 10 min. labeling and chasing, the uptake was demonstrated almost similar grade to control (60 min. labeling).

- (3) The incorporation was not detected in the flattened blastocysts which were cultured in  $^3\text{H}$ -thymidine-free media after washing out the blastocoelic fluid exposed to hot thymidine for ten minutes before rupture.
- (4) The zona pellucida was estimated to prevent the phenomenon that  $^3\text{H}$ -thymidine in the blastocoelic fluid permeates through to the cold media.

### Radioisotope Diagnosis of Pleural Effusion and Ascites

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**Purpose:** Pleural effusion and ascites are occasionally difficult to diagnose by conventional radiologic methods. In the presence of pleural effusion there develop high position of the diaphragm on the chest films and there arise difficulties in differentiating from abdominal tumor, paralysis of the phrenic nerve, eventration, herniation of the diaphragm, subdiaphragmatic

abscess and other similar conditions. Ascites may not present any significant abnormality. In order to supplement radiologic findings we have performed simultaneous liver and lung scanning by the use of two radioisotopes and by the technic of transmission scanning.

**Methods:** For simultaneous lung and liver scanning 200  $\mu\text{Ci}$  of  $^{131}\text{I}$ -MAA and 200  $\mu\text{Ci}$  of  $^{198}\text{Au}$