

fects from the latter was presumably due to submicroscopic particles emanating from the D-30 generator. They produced a larger surface area to dose ratio and were able to reach areas in the lung where they are locally most effective even though total dose from generator was 30 times less than from the standard nebulizer for a given number of breaths.

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Chilomastix mesnili Encystment *in vitro*.* (25689)

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Unlike amebas, which undergo encystment both spontaneously and by inducement *in vitro*, intestinal flagellates seldom exhibited cysts in culture. Although Boeck(1) was the first to cultivate *Chilomastix mesnili* trophozoites in an artificial medium and later other investigators agreed, it was not until 1928 that da Cunha and Muniz(2) observed encystment of this organism in blood agar and N.N.N. mediums. Ball(3), however, failed to confirm their results and also failed to produce cysts in a variety of mediums. In the present investigation 9 stool specimens cultured on a diphasic charcoal medium(4) yielded numerous cysts in addition to trophozoites of *C. mesnili*. They were designated as shown in Table I.

Cyst production was indicated clearly by numerous cysts observed in cultures. Often the cysts were clumped. In 2 instances neither cysts nor trophozoites were seen in stool specimens, but the cultures yielded many trophozoites and cysts.

There was no attempt to isolate any of these strains of *C. mesnili* for further study to deter-

TABLE I. Comparison of Stool Findings and Ameba Culture Findings—*C. mesnili*.

Year	Specimen(s)	Stool examination	Cyst findings in culture
1958	3455	No organisms seen	Numerous
1959	1734, 1740*	Trophozoites only	"
	1971, 1972*	<i>Idem</i>	"
	2446, 2451*	Many trophozoites, few cysts	"
	3502	Trophozoites only	"
	3677*	<i>Idem</i>	"
	3916*	"	"
	6391	No organisms seen	"
	6413	Few cysts only	"

* Purged patients.

mine continuance of cyst production in stock cultures.

Summary. Encystment of *Chilomastix mesnili* was observed in cultures of 9 stool specimens which had been placed in a diphasic charcoal medium.

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