dividual of New Orleans in approximately 12%. In a future publication it will be shown what number of these cases are true "carriers", and in what number the dysentery bacillus is a transitory sojourner of the intestinal tract. Such problems are of considerable practical importance from the standpoint of the spread of bacillary dysentery. It is noteworthy that only the lactose fermenting Duval type of *B. dysenteriae* was recovered from the normal stools in all instances except one, in which the true Shiga type was recovered. It is further noteworthy that in none of the normal stools examined was the Flexner type encountered.

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Susceptibility, Resistance and Spontaneous Recovery in Dogs Experimentally Infected with Endamoeba histolytica.*

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In previous communications[1, 2, 3] the writer has demonstrated a method whereby dogs may become infected with canine and human strains of *Endamoeba histolytica.* He has also proved that the dog is a particularly appropriate animal for study of amebic enteritis, since it is readily infected and manifests all of the symptoms described for human intestinal infections with this organism. Moreover the lesions in the large bowel are similar to those found in man. The present paper is based on an analysis of the protocols of 77 dogs which have been inoculated with the pathogenic ameba and on which careful observations have been made.

The essential data are set down in Table I. Eleven strains of the organism have been used, 2 of canine origin and 9 of human origin. There is also evidence that 8.4% of the positive cases were detected *post mortem* and that 12.7% of the animals which were positive at one time or another during their life failed to show any gross or histological *post mortem* evidence of infection.

The great majority of these animals were inoculated by the intra-

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1 Faust, E. C., PROC. SOC. EXP. BIOL. AND MED., 1930, **27**, 908.

2 Faust, E. C., *Porto Rico J. Pub. Health and Trop. Med.*, 1931, **6**, 391.

3 Faust, E. C., *Am. J. Trop. Med.*, 1932, **12**, 37.

TABLE I.
Experimental canine amebic enteritis, in strains A, B (canine) C to L (human).

	A	B	C	D	E	F	G	H	I	K	L	Totals
(1) Total	53	5	2	1	1	1	1	1	1	1	10	71+6x
(2) Total positives as determined by *antemortem* tubal exam.	48	5	1	1	1	0	0	1	1	1	8	67 (87) %
(3) Total positives at necropsy	46+2x	4	2	1	1x	0	1	1x	0	0	6+2x	60 (84.5)+6x
(4) Positives not detected *antemortem*	4	0	1	0	–	0	1	–	0	0	0	6 (8.4)
(5) Death due primarily to amebic enteritis	30	3	2	0	–	0	1	–	0	0	2	38 (53.5)
(6) Death due primarily to intercurrent infections	21	2	0	1	–	1	0	–	1	1	6	33 (46.5)
(7) Cases of apparent spontaneous recovery	5	1	0	0	–	1	0	–	1	0	1	9 (12.7)
(8) Total cases positive	52	5	2	1	1	0	1	1	1	1	8	73 (94.7)

x indicates animal still living.

rectal tubal method.[2] Eight received the inoculum in the form of cysts by mouth. The number of inoculations utilized and the relative proportions of "takes" by each route is set down in Table II.

TABLE II.
Relationship of route of inoculation and number of inoculation to infection.

	Rectal Route		Oral Route		Total		
	+	—	+	—	+	—	
					%	%	%
Single inoculation	49	2	7	1	56 (72.7)	3 (3.9)	59
Double inoculation	12	0	–	–	12 (15.6)	0 —	12
Multiple inoculation	3	1	–	–	3 (3.9)	1 (1.3)	4
Natural infection	–	–	2	0	2 (2.6)	0 —	2
Total	64	3	9	1	73 (94.7)	4 (5.3)	77

TABLE III.
Primary cause of death in cases of canine amebic enteritis.

	No.	%
Amebic enteritis	38	53.5
Bronchial or lobar pneumonia	8	11.3
Intestinal bacteremias	5	7.0
Hookworm infection	5	7.0
Peritonitis	2	2.8
Demodex dermatitis	2	2.8
Ruptured gall bladder	1	1.4
Acute intestinal obstruction	1	1.4
Intussusception	1	1.4
Proctitis of undetermined origin	1	1.4
Hookworm and stomatitis	1	1.4
Hookworm and dirofilarial obstruction of right heart	1	1.4
Unknown causes	3	4.2
Sacrificed by killing	2	2.8
Total	71	100.0

It is evident that a single inoculation is usually sufficient (in 72.7% of the cases) to produce infection.

Slightly more than half of the dogs died of a primary amebic enteritis. The intercurrent diseases which were primarily responsible for the death of the other animals are indicated in Table III. However, it would be erroneous to assume that similar infections did not play an important rôle in those succumbing to amebiasis, since it is hardly possible to obtain an animal from the streets without one or more pathogenic infections.

On the basis of these data it may be stated that experimentally 94.7% of the dogs in our Tulane series have been found susceptible to infection. Theoretically it would seem that all dogs with a similar history are susceptible. Resistance in these animals is relatively low, particularly when the active inoculum is introduced by rectum into the posterior ileum. Fifty-six members of the series became infected after a single inoculation. Only a single member of the group remained uninfected after multiple attempts to produce the infection. Another dog became positive only after 5 inoculations had been made. Spontaneous recovery, in so far as it can be determined at necropsy, was indicated in 9 of the 77 cases in the series. The protocols for some of these cases give a history of acute amebic dysentery following inoculation; in others the lesions were few, there was no symptomatology, and the organisms almost immediately disappeared from the bowel. In 2 such cases, however, lesions were found *post mortem* in the subcutaneous tissues, where foci of amebae, completely walled off from the lumen of the bowel, were actively multiplying. Nevertheless, it is believed that in some of the animals, the amebae had been completely evacuated from the bowel and that recovery had been spontaneously effected.

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Failure to Produce Filterable Forms of the Common Pathogens in the Kendall Media.

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Kendall[1] described a culture medium containing unaltered, or nearly unaltered protein, and without peptone or significant amounts

[1] Kendall, Arthur I., *Northwestern Univ. Bull.*, 1931, **32**, 5.