TABLE II. Relationship of Life Time of Culture to Lytic Activity of Extracts of Fungi.*

No.	Fungus	Size of area of lysis (diameter), mm Days of culture 3	6	9	12
B-4m	*Aspergillus flavus*	3	7	3	4
B-1273	" *oryzae*	7	10.5	8	4

* Lytic activity on heated bovine fibrin plate.

reached at one definite point during growth which corresponded to initial formation of spores. It tended to fall rapidly after that (Table II).

Summary. A study of properties of extracts from cultures of 160 non-pathogenic fungi has shown that 4 cultures produce non protein materials able to lyse plasma clots and fibrin, both human and bovine source; at least one shows some specificity against human plasma clots.

The authors wish to acknowledge the assistance of Doctor Alejandro Arce Q., Fellow of Guggenheim Foundation, and Doctor Rinaldo Turpini, Lederle Research Fellow, who cooperated in preparation of the purified substrates and carried out some experiments.

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Received July 29, 1958. P.S.E.B.M., 1958, v99.

Modifications of "George Wright" Canine Tracheal Divider.* (24399)

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The "George Wright" tracheal divider(1), long used in canine bilateral bronchospirometry, provides access to valuable pulmonary information. Two modifications, necessitated in our pulmonary studies, have made the instrument more useful without altering its basic principle.

Modification No. 1. Anesthetized dogs were placed on dog boards for measurement of bilateral oxygen uptakes (VO_2) and tidal volumes (V_t) by oxygen-filled, Benedict-Roth recording spirometers, using the "Wright" brass-tubed tracheal divider. Under these conditions VO_2 and V_t of the right lung are larger(Rahn 2). However, with the original brass-tubed divider, V_t of the right lung and VO_2 of the left lung were larger.

Study of the regional anatomy of the dog's carina explained these discrepancies. The right pulmonary artery in a supine dog lies directly over the tracheal carinal bifurcation. Because of random differences in neck length and placement of the dog's head below the plane of the carina, a fulcrum point in the neck often was inadvertently established whereby the brass-tubed divider applied leverage upward, partially blocking the right pulmonary artery. Blood flow then shifted to the left lung by this resistance, and left lung VO_2 exceeded right lung VO_2.

To correct this condition, equivalent-diametered polyethylene tubes were substituted on the divider (Fig. 1). These tubes were stiff enough so placement of the divider was not handicapped, yet they were flexible enough to prevent inadvertent establishment of a leverage fulcrum. The VO_2 and V_t of the right lung always were larger than those of the left lung when measured with this modified divider. Right:left % VO_2 and % V_t of these dogs showed close agreement with right:left % weight.

Modification No. 2. Following excision of the 3 lower right lung lobes, leaving only the right apical lobe and complete left lung, the right apical lobe's size and weight increased about 150%. The remaining right apical lobe's expansion alters the angle of tracheal

* This investigation was supported jointly by Air Research and Development Command, Wright Field, O., and School of Aviation Medicine, Randolph Field, Texas.

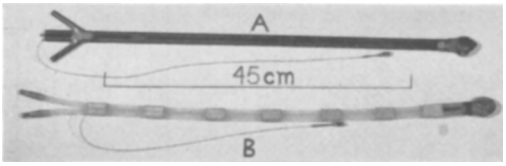

FIG. 1. (A) Original brass-tubed, "George Wright" tracheal divider. (B) Polyethylene-tubed modification of "George Wright" tracheal divider.

bifurcation. The right main stem bronchus leaves the carina at a much more acute angle than before excision, and separation of right from left lung becomes extremely difficult because the divider "head" slips by the bifurcation and lodges in the right main stem bronchus. Examination of a plastic cast of the tracheobronchial tree in the carina region revealed that no bronchi originate along the internal edge of the carinal bifurcation (for at least 3 cm). A new divider "head" was constructed with prongs that are simple projections of the brass tubes filed into the shape shown in Fig. 2. Each prong tip was blunted with a rounded drop of lead solder to prevent scratching the trachea when inserting the divider.

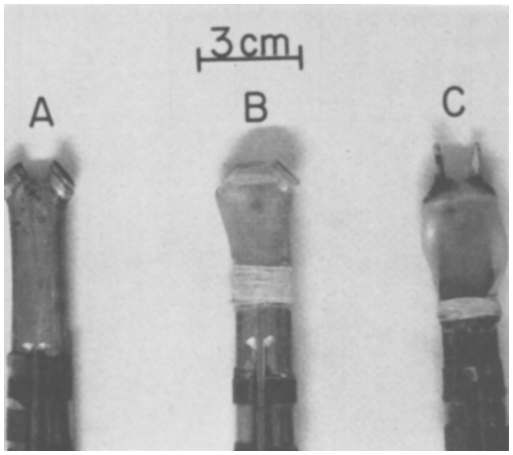

FIG. 2. (A) "George Wright" tracheal divider "head" without balloon. (B) "George Wright" tracheal divider "head" with balloon. (C) Pronged modification of "George Wright" tracheal divider "head" with balloon.

Summary. Two modifications of the "George Wright" canine tracheal divider have been made. They are: 1) substitution of polyethylene for brass tubing, and 2) addition of prongs to the divider head. Inadvertent pulmonary artery obstruction is prevented, and the divider does not slip past the carina.

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Received August 25, 1958. P.S.E.B.M., 1958, v99.

Effect of Antibiotics on Growth of Lactose-Fed Rat. (24400)

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Use of the rat in nutritional studies of human milk is complicated by its intolerance to high concentration of lactose. Symptoms of lactose toxicity are intense diarrhea for the first few weeks, untidy bloated appearance, retarded rate of growth, polydipsia, polyuria, galactosuria, and after prolonged feeding cataracts appear(1). Since high levels of dietary galactose will produce most of these symptoms, it is sometimes assumed that toxicity of lactose is due entirely to its galactose component. However, feeding lower levels of lactose will produce a growth retardation that is not duplicated by an equivalent mixture of glucose and galactose(2,3), thus the intact disaccharide is implicated rather than its digestion product. Because of incomplete digestion and absorption, considerable amounts of lactose reach the lower intestine, resulting in an increase in bacterial population (1). The adverse effect of lactose feed-

* The authors wish to acknowledge appreciation to Mrs. A. Zilliken and Miss N. Minnick for technical assistance.