

CONTOX

TUBERCULIN

In 1882 Robert Koch isolated, cultured and identified the causative agent of tuberculosis; he called it "Tubercle bacillus". This small bacillus is now known as Mycobacterium tuberculosis var. hominis. Eight years after this most important contribution to the etiology of the disease, at the 10th International Congress of Medicine held in Berlin in August 1890, Koch announced that he had found a curative agent against tuberculosis. The agent was described simply as a "brownish transparent fluid" which protected against tuberculosis in guinea pigs and also cured established disease.

In January 1891, Koch disclosed that the fluid was a broth culture filtrate of tubercle bacilli to which he gave the name "tuberculin". Unhappily, his claims for the protective and curative properties of tuberculin were soon to be challenged, and criticism became outspoken. Indeed, Koch's claims for the use of tuberculin as a cure for tuberculosis proved ill founded; he had tried to fit a square peg into a round hole.

However, for tuberculin as a diagnostic agent the story was entirely different; the peg did fit the hole. Koch's observations on a marked difference in sensitivity response to injected tuberculin between the tuberculous and the non-tuberculous subject proved to be sound, and laid the foundation for one of the most valuable and most widely used diagnostic tests in both veterinary and human medicine and in the field of public health. Moreover, the method of preparing Old Tuberculin, as Koch's fluid is known today, is still essentially the same as Koch described it in 1891 and consists of a crude filtrate of cultures of M. tuberculosis which contains tuberculoprotein, polysaccharide, nucleic acid and other by-products released in the filtrate during bacterial growth. Although Old Tuberculin is still used today, a more purified preparation of tuberculin has been prepared and it is known as Tuberculin Purified Protein Derivative or P.P.D.

When an individual has developed an allergic sensitivity to the protein of the tubercle bacilli resulting from an infection, this allergic sensitivity may be demonstrated by introducing into the skin an extremely small quantity of tuberculin O.T. or P.P.D. At the site of introduction of the tuberculin into the skin, a red indurated (firm and swollen) spot at least 5 millimeters in diameter appears in 24 or 48 hours. This reaction is called a positive tuberculin reaction, and indicates that the individual has been infected with T.B. germs and may have tuberculosis. Therefore, tuberculin is used extensively as a diagnostic agent to discover new cases of T.B. infection. If no reaction is present at the site of injection of tuberculin, the test is negative and it indicates that the person tested has not been infected with T.B. bacilli. Control in the bovine population is also carried out by government testing requirements.

The use of tuberculin as a diagnostic agent led to the development of new methods of administration which eliminated the generalized reaction due to subcutaneous injections and caused, instead, only a localized reaction at the injection site in the skin. In general, the new testing procedures involved the administration of tuberculin onto or into the skin rather than into the subcutaneous tissues. By 1910 the roster of methods included a cutaneous test (Von Pirquet), a patch test (Vollmer), a conjunctival test (Calmette), an intracutaneous test (Mantoux), and other variations. Each was purported to possess distinct advantages over the other; and each, in its turn, inspired loyal proponents. Three methods have survived; the Pirquet cutaneous test, the patch (percutaneous) test, and the Mantoux intracutaneous test. In 1951, Heaf introduced a mechanical device for administering the skin test which requires no skill for its performance and is well accepted by children. In recent years, disposable devices such as the "Tine" tests and the "monovacc" test have been successfully used for tuberculin skin testing.

The Tuberculin Department of the Connaught Laboratories has been, for many years, extensively engaged in the production of Old Tuberculin (OT) and P.P.D. Research has played a major role in the development of P.P.D. and today the Tuberculin P.P.D. distributed by these Laboratories is without doubt one of the best available. Since the first

commercial lot of P.P.D. was made available in 1960, approximately 60 million doses have been distributed in Canada and abroad. This amount is expected to double in the next few years since school children are being tested routinely every year. To cope with the increasing demand for this product and to overcome certain technical requirements, the Tuberculin Department is now processing a large batch of P.P.D. which will represent approximately 4.5 billion tuberculin tests. Finally, new types of tuberculin are now being developed and will be used in the very near future as a more refined diagnostic tool for the control of tuberculosis.

DID YOU KNOW?

INSULIN PURIFICATION IS NOW LOCATED IN BUILDING 57?

Increased demand made it necessary to provide additional facilities in Building 50 for the fractionation of human plasma and the space in Building 57, formerly occupied by the Library, was remodelled for use by Insulin Purification, which moved in the first week in February. Now BLOOD FRACTIONATION is expanding to become the sole occupant of Building 50, as was expected in the original plan in 1953.

THE UNIVERSITY OF TORONTO EMPLOYEES' CREDIT UNION LIMITED IS MOVING ON FEB. 17TH TO ITS NEW OFFICE AT 199 COLLEGE ST.?

Such a transfer during the hectic days of preparation for the Annual Meeting is enough to shatter anyone, but no doubt Frank Campbell will sail through this turbulence with his customary composure.

Before the Annual Meeting last year, a group of the Connaught members met for dinner at the Embassy Restaurant Bloor & Bellair. If you are interested in joining the group this year, would you please leave your name with Publications Department, Local 2644, to assist in estimating space and arranging transportation.

BEST WISHES FOR A SPEEDY RECOVERY TO -

William Byrne - Surgical Unit, 20 Wynford Dr., Don Mills.

At home:	Beryl Abbey	Muriel Daoust
	Bob Abbey	Tim Davies
	George Bateman	Alma Fletcher
	Vi. Brown	Leslie Foldi
	Dr. R. Belcourt	Stasys Merkelis
	Doug. Brown	Stella Sibbick
		Bill Smith

TRANSPORTATION

<u>Desired</u>		<u>Local</u>
A. Ambersley	Gerrard & Jones Ave.	2740
G. Varley	Bayview & Eglinton	2774
R. Proulx	Parliament or Sherbourne-Bloor	2613
<u>Offered</u>		
B. Moore	From Burnhamthorpe Rd. via Rexdale & No.7	2643
Geoffrey Lee	From Queen & Lansdowne, via Dupont, Dufferin & Wilson Hts.	2705

COMING EVENTS

Monday, FEB. 24TH

HOBBY SHOW - CAFETERIA, BUILDING 83.

to
Friday,
MAR. 7TH

Last year's show was a revelation of the many talents in our midst. It promises to be equally interesting and attractive this year. Let it inspire you to undertake a project for next year's show!

Wednesday,
FEB. 26TH

ANNUAL MEETING - UNIVERSITY OF TORONTO
EMPLOYEES' CREDIT UNION LIMITED - AT
HART HOUSE.

Program: 7.30 p.m. Movie.
8.00 p.m. Business Meeting
- followed by a
Wine & Cheese Party.
