

Dramatic Speed-up in Virus Detection

By

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SIMPLE and quick diagnosis of virus diseases has now been made possible.

A method of identifying viruses which reduces diagnosis time from a matter of weeks to two or three hours—and at about one-twentieth the cost of present techniques—was announced in London on October 17, 1967.

This development is particularly important for the developing countries, which have neither the facilities nor the trained people to carry out the long, patient tissue cultures necessary up to now.

The technique, announced by the firm of Winthrop Biologicals, makes it possible to see a virus, invisible under the microscope, by attaching a fluorescent tag to it. It also shows which particular virus is causing an infection.

First, antibodies are made by injecting an animal—a rabbit, for example—with a virus. The rabbit

will form antibodies to fight that virus only. These antibodies are then extracted.

More than a hundred types of antibody which are each specific to one virus are now available. A patient's symptoms usually narrow the possible viruses causing a disease down to a small group.

Smears of a patient's cells are then taken. The antibodies corresponding to the suspected group of viruses are applied to the cells. Only one antibody will pass through the cell wall and attach itself to the virus responsible for the disease—rather like a key being placed into a lock. All the other antibodies—keys which do not fit—will be removed on washing.

Another reagent, called Fluoroscanner by the firm, is used to treat the smears. This will attach itself to the antibody. It fits the other end of the key in the lock.

It incorporates a fluorescent dye which will show up under ultra-

violet or blue light. So the patches of brightness glowing under the microscope reveal the identity of the particular virus.

The technique could be a great advance in diagnosis of virus diseases which must be as quick as possible for proper treatment. Antiviral drugs are at the beginning of their development, and speedy identification of viruses will help the search for more.

In epidemics—small pox or polio, for example—rapid identification will be invaluable in making decisions about action to combat the disease.

It also opens up new possibilities in animal health.

Winthrop Biologicals have equipped a specially-built mobile laboratory, fitted with fluorescent microscopes, for tours of British hospitals to demonstrate and give instruction in the use of Fluoroscanner in both virus and bacteria identification. (B.I.S.)

Appeal Launched In Britain For South Indian Cancer Centre

An appeal to raise £15,000 to cover next year's operating costs at the International Cancer Centre at Neyyoor, South India, was launched in Britain on December 19, 1967.

An article in *The Guardian* described the work being carried out at the centre to fight oral cancer and discussed plans to expand activities in an area where there is only one radiotherapy unit for every 7,000,000 of the population. Readers were invited to send contributions to the London Office of

the centre.

This fund-raising office was established last July and is now operating on a permanent basis. A spokesman said that hitherto money had been received from private subscribers, but now it had been decided to launch a national appeal.

Visit by Physicist

Besides the *Guardian* article, news about the centre's work has appeared in the medical journal *Lancet*. Next week an advertise-

ment for funds is to appear in the *Sunday Times*.

The London office recently financed a two-week visit to Neyyoor by Dr. Roy Ellis, a physicist from St. Bartholomew's Hospital, who calibrated the centre's cobalt unit in October.

Almost £80,000 has been contributed to the centre by Britain, Canada, East and West Germany, the United States and India since it was started in 1963. (B.I.S.)