BIOLOGY

Registry for Antibiotics

➤ SO MANY mold remedies have been discovered and so many more are currently being reported that an international registry of them is now needed, in the opinion of Dr. Kenneth B. Raper, principal microbiologist of the U. S. Department of Agriculture's Northern Regional Research Laboratory, Peoria, Ill.

Antibiotics is the better name for these chemicals. Some of them, such as penicillin, come from molds but others, such as bacitracin and subtilin, come from bacteria.

More than 300 antibiotics have been reported in the past 10 years since the big push to produce penicillin started, Dr. Raper stated in his presidential address before the Mycological Society of America.

"Of these, only five," Dr. Raper pointed out, "have attained the stature of major drugs, namely: penicillin, streptomycin, chloramphenicol (chloromycetin), aureomycin and terramycin.

"A few others find limited applications and today remain on the threshold as potentially important drugs, namely: tyrothricin, polymyxin, bacitracin, subtilin, neomycin, thiolutin and possibly viomycin."

All the others, for one reason or another, are considered unpromising for use as remedies. Some are not potent enough. Many are too toxic, or poisonous, for use in animals and man.

While the percentage, five out of 300, is very low, the occasional "strike" more than makes up for all the disappointments, Dr. Raper pointed out. The hope of such a "strike" keeps scientists and pharmaceutical research laboratories working on, trying to discover another, possibly better antibiotic, or one that stops diseases for which there still is no remedy. Virus diseases such as influenza and poliomyelitis are examples of those for which antibiotics are sought.

This intense search, however, has resulted in the reporting of more and more antibiotic substances. Sometimes the new ones turn out to be duplicates of others previously reported. Sometimes the person reporting a new antibiotic does not give it a name and does not identify by name the mold or bacteria or other organism from which it comes.

A national, or better still an international, registry of antibiotics and the organisms which produce them would go far, in Dr. Raper's opinion, toward clearing up some of the confusion and preventing much duplication of scientific effort in this field.

Science News Letter, December 29, 1951

TECHNOLOGY

Air Agitation in Oil Tanks Helps to Extinguish Fires

➤ ORDINARY AIR is the newest aid in controlling fires in oil tanks. This air is forced into the bottom of the tank and, rising to the surface, causes agitation of the contents which brings cold oil from lower layers to the burning surface to decrease vapors feeding combustion.

The ordinary foams used in fire-fighting do the rest of the job. The job is easy because there is no slop-over, frothing and expansion of the hot oil layer at the top that there would be without the application of air and the agitation produced. In one test a tank holding blazing crude oil was under control in 45 seconds and completely extinguished in five minutes by firemen applying foam at close range.

One of the practical aspects of the plan is that no intricate or costly equipment is needed. The air is pumped into the tanks through the pipes that are already there, installed to draw off water that has collected or to draw off oil. Readily available air and a pump capable of producing about six pounds of pressure will do the job.

This process was developed by J. L. Risinger of the Socony-Vacuum Oil Company. It has been successfully used in a tank of 100,000 gallons of flaming kerosene, extinguishing the fire in five seconds. The method has been applied only to oil tanks so far but it is expected to be equally effective for tankers at sea.

Science News Letter, December 29, 1951

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