

Island in place of its Alameda base from the time the fair opens. The twice-a-week clipper departures to New Zealand and the Philippines, a schedule expected to be in operation by that time, will provide the most prominent part of the Pan-American Airways exhibit.

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## PSYCHOLOGY

## Dogs Show Wide Differences In Problem-Solving Abilities

**D**OGS DISPLAY marked individual differences in "I.Q.," no less than their two-legged lords and masters, Dr. E. G. Sarris of the Institute for Environmental Research in Hamburg, Germany, has found. Tested by their abilities to solve problems connected with the getting of a coveted piece of meat, their mental abilities ranged all the way from very bright to plain, doggone dumb.

Dr. Sarris started with eight dogs of assorted sexes, breeds, and ages. At first he gave them an easy problem, of getting the meat when they were separated from it by a serpentine fence constituting a simple maze. All the dogs could solve that one, though some of them made hard work of it while the cleverer individuals went through it very quickly.

Then he increased the difficulties, imposing such brain-puzzlers as getting the meat out from under a can loaded on top with bricks, hauling it over a wall on the end of a string, moving small carts and boxes that would enable them to reach it when it was hung too high for direct approach, etc.

At each step-up in difficulty, some of the animals found the problem too hard and gave it up. Finally, Dr. Sarris was working with his two brightest dogs, a male named Argos and a female named Niki. They could think their way through all the problems he posed them. Of course, Dr. Sarris was careful to devise situations in terms of dog mentality, rather than of human minds.

The Hamburg zoologist believes that practical uses of some importance can be derived from his study. His results, he holds, cast considerable doubt on the universally accepted idea that certain breeds of dog are best for particular working purposes, like herding or hunting. Of far greater importance, he believes, is a dog-by-dog examination for individual differences in learning capacity, based on individual variations in temperament and intelligence.

The climbing fern can climb about three feet.

## PHARMACY

# Medicine-Making, Research Now March Side By Side

## Dedication of Two New Laboratories for Squibb and Abbott Gives Promise of New Aid in Fight on Disease

**A** NEW trend in the world of drugs, destined to aid man's search for health is signalized by the dedication, within a few days of each other, of new medical research laboratories of two large drug manufacturing firms.

On Oct. 7 the Abbott Laboratories celebrated their fiftieth anniversary by opening a new research laboratory building at North Chicago, Ill. On Oct. 11, E. R. Squibb and Son dedicated the new laboratory building of the Squibb Institute for Medical Research at New Brunswick, N. J.

Medicine-makers such as these are no longer confining themselves solely to the manufacture of drugs. In addition they are undertaking important programs of research on medical matters. Large groups of scientists—doctors, physiologists, chemists and bacteriologists as well as pharmacologists—are delving into problems of disease, seeking causes as well as possible cures. Even on the strictly medicine-making side, the idea is not just to make a new remedy, but to find better and better medicines and even, perhaps, to find ways of preventing illness.

### Asks for Freedom

**G**IVE the scientists on your staff freedom to solve the riddles of science, regardless of possible practical applications, and provide for cooperation between practising physicians and laboratory investigators.

This sums up the advice given by leading scientists, including two Nobel Prize winners, to the new Squibb Institute for Medical Research.

Such advice is likely to be followed, it appears from the statement of Dr. John F. Anderson, vice-president of E. R. Squibb and Sons, the pharmaceutical manufacturing firm which has founded the Institute.

"Problems for investigation," he said, "will be chosen by those working in the Institute because of their working in the tific interest, just as is the practice in universities or other institutions of re-

search. Squibb has realized that it is such unimpeded research which has given to the world a large part of the fundamental discoveries which have so favorably affected modern life."

Every day, in thousands of hospitals the world over, blood is examined for anemia or for malaria germs or for many other conditions by methods developed by the German scientist, Paul Ehrlich. Ehrlich, however, did not sit down at his laboratory bench and decide to find a stain or dye that would show anemic blood cells clearly under the microscope. As Dr. Abraham Flexner, director of the Institute of Higher Studies of Princeton University, recalled at the dedication, Ehrlich's highly practical contributions resulted because at medical school he was allowed to "fool around" with dyes and microscopes, just to satisfy his own curiosity.

When and if the results of research in pure science have practical possibilities, the laboratory scientists must turn to clinical investigators, the physicians who do their research at the bedside.

"For the cure and prevention of disease and the relief of pain the final test is on man himself," Dr. George R. Minot, professor of medicine, Harvard University, and discoverer of the liver cure for pernicious anemia, said. A clinical investigative unit needs to be a part of or associated with an institute for medical research. "I am delighted to learn that clinical facilities with a small ward for the observation of patients in connection with various problems being studied by the research staff are being planned."

Dr. Minot's studies of anemia, for which he shared a Nobel Prize award, resulted from such a combination of clinical or bedside and laboratory research.

Dr. Russell M. Wilder of the Mayo Foundation cited the Thorndike Memorial Laboratory of the Boston City Hospital, of which Dr. Minot is director, and the Rockefeller Hospital in New York as desirable examples of institutions where such combined research can be carried on with life-saving results.